DRAFT ADDENDUM/ERRATA

To

Preliminary Alternatives Analysis Report for the San Francisco to San Jose Section

June 2010

Attached are replacement pages for the Preliminary Alternatives Analysis Report that revises the unit items and unit costs for a 4-track configuration on a structure and in a trench. These corrections do not alter the conclusions of the Preliminary Alternatives Analysis, however given the nature of the changes, the Authority felt it necessary to publish this Addendum/Errata.

Basis for the changes: The project team received a question from a member of the public regarding the costs basis for the "Standard Structure" unit cost item. Upon review of the "Standard Structure" item and analysis of other similar cost items associated with the "Open Trench" design option, the following unit items have been updated and/or revised:

- Renamed unit item for "Standard Structure" to be "Standard Structure (2 tracks)"
- Renamed unit item for "Trench Short" to be "Trench Short (2 tracks) (<1000 ft)"
- Renamed unit item for "Trench Long" to be "Trench Long (2 tracks) (1000 + ft)"
- Added unit item for "Standard Structure (4 tracks)"
- Added unit item for "Trench Short (4 tracks) (<1000 ft)"
- Added unit item for "Trench Long (4 tracks) (1000 + ft)"
- Quantity for unit item "Retaining Wall" deleted for Open Trench design option
- Quantity for unit item "Containment Wall" deleted for Open Trench design option

These technical corrections and other minor calculation or typographical changes are addressed in the attached Addendum/Errata sheets (the corrections are highlighted and underscored in the attached sheets). The pages should be inserted in the Preliminary Alternatives Analysis to replace previously issued corresponding pages of the main body of the document in section 4.3, and the complete Appendix L.

Table 4-4 Summary Comparison of Design Options for Subsection 1 – San Francisco

	Evaluation Me			ay Drive to South of 16th reet	1B & 1C - South of 1 of Cesar Cha			North of Cesar Chavez Portal Tunnel No. 4
	Evaluation in	edsure				Covered Trench /		Covered Trench/
		Travel time	At Grade Same for all options	Covered Trench/ Tunnel	At Grade	Tunnel	At Grade	Tunnel
	Maximize ridership / revenue potential	Route length	Same for all options		Same for all options Same for all options		Same for all options	
	Maximize connectivity and	Intermodal connections	Not applicable		Not applicable		Same for all options	
	accessibility	micrinodal connections	ινοι αρμισασίο	<u> </u>	Not applicable		Not applicable	
Design Objectives	Minimize operating and capital costs	Operating and Maintenance (O&M) costs (relative costs associated with different vertical alignment options)	Lowest	Higher than At Grade option, due to tunnel walls, drainage, ventilation, life safety, etc	High	High	High	High
	Capital Costs	Capital cost (\$ 2009), does not include ROW	114 million	114 million	299 million	299 million	458 483-1,049 million	978 <u>1,049</u> million
		Acquisition cost of additional ROW	Highest	Lowest	Lowest	Lowest	Highest	Lowest
	Development potential for TOD within walking distance of station	Development potential for TOD within 1/2 mile of station location	Not applicable		Not applicable		Not applicable	
Land Use	Consistency with other planning efforts and adopted plans	Qualitative analysis of applicable planning and policy documents	Consistent with adopted plans	and policies	Consistent with adopted plans and policies Inconsistent with adopted plans and policies		Consistent with adopted plans and policies	
Constructability	Constructability, access for construction, within existing transportation ROW (does not include station constructability impacts)	Need for temporary construction easements (TCE)	Construction would primarily occur within ultimate ROW	Construction would primarily occur within ultimate ROW; TCE required at tunnel portal locations	Construction would primarily occur within ultimate ROW	Construction would primarily occur within ultimate ROW; TCE required at tunnel portal locations	Construction would primarily occur within ultimate ROW	Construction would primarily occur within ultimate ROW; TCE required at tunnel portal locations
	Disruption to existing railroads	Identify existing freight rail and other rail service connections	None	,	None			
	Disruption / relocation of utilities	Identify major utilities requiring relocation	None		None		None	
Disruption to Communities	Displacements	Potential impact on properties due to ultimate ROW requirements and grade separations	Low; Approximately 10% of subsection has existing ROW <60', 10% is between 80'-89' and 80% is over 100'. Impacts due to grade separations at Mission Bay Drive and 16 th Street	Low; Approximately 10% of subsection has existing ROW <60', 10% is between 80'-89' and 80% is over 100'. Possibly some impacts due to ventilation structures	Low; Possibly some impacts due to ventilation structures	Low; Possibly some impacts due to ventilation structures	Low; Approximately 30% of subsection has existing ROW is between 80'-89' and 70% is over 100'; Possibly some impacts due to ventilation structures	Low; Nominal width for this option is 96'. Approximately 30% of subsection has existing ROW is between 80'-89' and 70% is over 100'; Possibly some impacts due to ventilation structures
affec Local	Properties with access affected	Properties with access affected	Access for properties affected due to grade separations	None	None		None	
	Local traffic effects around station	Increase in traffic congestion	Not applicable		Not applicable		Not applicable	

Table 4-5 Summary Comparison of Design Options for Subsection 2 – Brisbane, South San Francisco, San Bruno, Millbrae

	Evaluation Meas	sure	2A - South Portal Tunnel No. 4 to South of Colma Creek	el 2B - South of Colma Creek to South of I-380			2C - South of I-380 to South of Center Street					
			At Grade	Aerial Viaduct	Berm	At Grade	Aerial Viaduct	Berm	At Grade	Open Trench (HST Only)	Covered Trench/Tunnel (HST Only)	
	Maximize ridership	Travel time	Same for all options	Same for all options	Same for all options	Same for all options	Same for all options					
	/ revenue potential	Route length	Same for all options	Same for all options	Same for all options	Same for all options	Same for all options					
	Maximize connectivity and accessibility	Intermodal connections	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable			_		
	Minimize operating and capital costs	Operating and Maintenance (O&M) costs (relative costs associated with different vertical alignment options)	Low	Higher than Berm and At Grade options, due to aerial structure	Lowest	Lowest	Higher than Berm and At Grade options, due to aerial structure	Lowest	Lowest	Higher than Aerial Viaduct option, due to retaining walls, drainage, etc	Higher than Open Trench option, due to ventilation, life safety, etc	
		Capital cost (\$ 2009), does not include ROW	74 million	-	66 million	-	281-475 <u>273-478</u> million	279-236 -441 million	212 <u>169</u> -408 million	212-443 169- 273 million	374- <mark>475 <u>478</u> million</mark>	
		Acquisition cost of additional ROW	Highest	Medium	Medium	Highest	Medium	Medium	Highest	Medium	Lowest	
Land Use	Development potential for TOD within walking distance of station	Development potential for TOD within 1/2 mile of station location	Not applicable	Not applicable			Not applicable					
Land Use	Consistency with other planning efforts and adopted plans	Qualitative analysis of applicable planning and policy documents	Consistent with adopted plans and policies	Consistent with adopted	d plans and policies		Consistent with adop	oted plans and policies				
Constructability	Constructability, access for construction, within existing transportation ROW (does not include station constructability impacts)	Need for temporary construction easements (TCE)	Construction would primarily occur within ultimate ROW	Medium; Nominal width with TCE for this option is 103'. Approximately 15% of subsection is < 90' and 85% over 100'	Medium; Nominal width with TCE for this option is 109'. Approximately 15% of subsection is <90' and 85% over 100'	Construction would primarily occur within ultimate ROW	Low; Nominal width with TCE for this option is 103'. Approximately 70% of subsection is <90' and 30% over 100'. Public ROW available for TCE	Low; Nominal width with TCE for this option is 109'. Approximately 70% of subsection is <90' and 30% over 100'. Public ROW available for TCE	Construction would primarily occur within ultimate ROW	Approximately 70% of subsection is <90' and 30% over 100'. Public ROW available for TCE	Approximately 70% of subsection is <90' and 30% over 100'. Public ROW available for TCE	
	Disruption to existing railroads	Identify existing freight rail and other rail service connections	Sierra Point Lumber Spur and South San Francisco Yard	Not feasible to maintain connections to South San Francisco Yard and Granite Rock/Central	South San Francisco Yard and Granite Rock/Central Concrete Trackage	South San Francisco Yard and Granite Rock/Central Concrete Trackage	None			_		

Subsection 2 continued

			2D	- South of Center Street to South of Mill	brae Avenue			
	Evaluation Measure	3						
			At Grade	Open Trench (HST Only)	Covered Trench/Tunnel (HST Only)			
	Maximize ridership / revenue potential	Travel time	Same for all options					
	Waximize nacistip / revenue potential	Route length	Same for all options					
	Maximize connectivity and accessibility	Intermodal connections	Same for all options					
Design Objectives		Operating and Maintenance (O&M) costs (relative costs associated with different vertical alignment options)	Lowest Higher than Berm and At Grade options, due to retaining walls, drainage, etc		Higher than Open Trench option, due to ventilation, life safety, etc			
	Minimize operating and capital costs	Capital cost (\$ 2009), does not include ROW	<mark>87 61</mark> -356 million	95-195 <u>61-157</u> million	330-356 million			
		Acquisition cost of additional ROW	Highest Medium		Lowest			
Landlica	Development potential for TOD within walking distance of station	Development potential for TOD within 1/2 mile of station location	Same for all options (Millbrae HST Sta					
Land Use	Consistency with other planning efforts and adopted plans	Qualitative analysis of applicable planning and policy documents	Inconsistent with adopted plans and	policies	Consistent with adopted plans and policies			
	Constructability, access for construction, within existing transportation ROW (does not include station constructability impacts)	Need for temporary construction easements (TCE)	Construction would primarily occur within ultimate ROW	Low; Nominal width with TCE for this option is 120'. Approximately 80% of subsection has existing ROW over 100'	Low; Nominal width with TCE for this option is 120'. Approximately 80% of subsection has existing ROW over 100'			
Constructability	Disruption to existing railroads	Identify existing freight rail and other rail service connections	None					
	Disruption / relocation of utilities	Identify major utilities requiring relocation	None	11' wide and 60' wide storm drains south of Hillc	rest Boulevard			
	Displacements	Potential impact on properties due to ultimate ROW requirements and grade separations	Low; Approximately 20% of subsection has existing ROW <90' and 80% is over 100'	Low; Approximately 20% of subsection has existing ROW <90' and 80% is over 100'	Low; Approximately 20% of subsection has existing ROW <90' and 80% is over 100', Possibly some due to ventilation structures			
Disruption to Communities	Properties with access affected	Properties with access affected	None					
	Local traffic effects around station	Increase in traffic congestion	Same for all options					
	Local traffic effects along alignment and at grade crossings Identify streets with permanent loss of traffic lanes due to ultimate ROW requirements and identify traffic effects at grade crossings		None					

Table 4-6 Summary Comparison of Design Options for Subsection 3 – Burlingame, San Mateo

			3	SA - South of Millbrae Aver	nue to South of Mills Creel	<			
	Evaluation Meas	sure	Aerial Viaduct	At Grade	Open Trench	Covered Trench/Tunnel			
	Mayimiza ridarshin / rayanya natantial	Travel time	Same for all options						
	Maximize ridership / revenue potential	Route length	Same for all options						
	Maximize connectivity and accessibility	Intermodal connections	Not applicable						
Design Objectives		Operating and Maintenance (O&M) costs (relative costs associated with different vertical alignment options)	Higher than At Grade option due to aerial structure	Lowest	Higher than Aerial Viaduct and At Grade options, due to retaining walls, drainage, etc	Higher than Open Trench option, due to ventilation, life safety, etc			
	Minimize operating and capital costs	Capital cost (\$ 2009), does not include ROW	-	9 12 million	132 90 million	345 million			
		Acquisition cost of additional ROW	- Highest		Medium	Lowest			
Landlin	Development potential for TOD within walking distance of station	Development potential for TOD within 1/2 mile of station location	Not applicable						
Land Use	Consistency with other planning efforts and adopted plans	Qualitative analysis of applicable planning and policy documents	Consistent with adopted plans and policies						
	Constructability, access for construction, within existing transportation ROW (does not include station constructability impacts)	Need for temporary construction easements (TCE)	Low; Nominal width with TCE for this option is 102'. Existing ROW is over 100' throughout the subsection	Construction would primarily occur within ultimate ROW	Low; Nominal width with TCE for this option is 120'. Existing ROW is over 100' throughout the subsection	Low; Nominal width with TCE for this option is 120'. Existing ROW is over 100' throughout the subsection			
Constructability	Disruption to existing railroads	Identify existing freight rail and other rail service connections	None						
	Disruption / relocation of utilities	Identify major utilities requiring relocation	None	None	2-83"x53" Oval CIP storm dra	in			
	Displacements	Potential impact on properties due to ultimate ROW requirements and grade separations	Low; Nominal width for this option is 79'. Existing ROW is over 100' throughout the subsection	Low; Nominal width for this option is 96'. Existing ROW is over 100' throughout the subsection	Low; Nominal width for this option is 96'. Existing ROW over 100' throughout the subsection	Low; Nominal width for this option is 96'. Existing ROW over 100' throughout the subsection, Possibly some due to ventilation structures			
Disruption to Communities	Properties with access affected	Properties with access affected	None						
	Local traffic effects around station	Increase in traffic congestion	Not applicable						
	Local traffic effects along alignment and at grade crossings	Identify streets with permanent loss of traffic lanes due to ultimate ROW requirements and identify traffic effects at grade crossings	None						

Subsection 3 continued

				3	B - South of Mills Creek to North of Villa	a Terrace	
	Evaluation Meas	sure	Aerial Viaduct	Berm	At Grade	Open Trench	Covered Trench/Tunnel
	Maximize ridership / revenue	Travel time	Same for all options				
	potential	Route length	Same for all options				
Design	Maximize connectivity and accessibility	Intermodal connections	Not applicable				
Objectives	Minimize operating and capital	Operating and Maintenance (O&M) costs (relative costs associated with different vertical alignment options)	Higher than Berm and At Grade options, due to aerial structure	Lowest	Lowest	Higher than Berm and At Grade options, due to retaining walls, drainage, etc	Higher than Open Trench option, due to ventilation, life safety, etc
	costs	Capital cost (\$ 2009), does not include ROW	194 <u>245</u> million	-	-	433 413 million	937 million
		Acquisition cost of additional ROW	Medium	Medium	Highest	Medium	Lowest
	Development potential for TOD within walking distance of station	Development potential for TOD within 1/2 mile of station location	Not applicable				
Land Use	Consistency with other planning efforts and adopted plans	Qualitative analysis of applicable planning and policy documents	Consistent with adopted plans and policies	Consistent with adopted plans and policies; strong local opposition to this type of structure; the berm structure (wall) would create a perceived barrier through this area which is not consistent with the local communities' character and land uses Consistent with adopted plans and policies Consistent with adopted plans and policies Consistent with adopted plans and policies		and policies	
Constructability	Constructability, access for construction, within existing transportation ROW (does not include station constructability impacts)	Need for temporary construction easements (TCE)	Low; Nominal width with TCE for this option is 103'. Approximately 70% of subsection has existing ROW over 100'	Low; Nominal width with TCE for this option is 109'. Approximately 70% of subsection has existing ROW over 100'	Construction would primarily occur within ultimate ROW	Low; Nominal width with TCE for this option is 120'. Approximately 70% of subsection has existing ROW over 100'	Low; Nominal width with TCE for this option is 120'. Approximately 70% of subsection has existing ROW over 100'
constructability	Disruption to existing railroads	Identify existing freight rail and other rail service connections	None				
	Disruption / relocation of utilities	Identify major utilities requiring relocation	60kV electric junction line near 9th Avenue	60kV electric junction line near 9th Avenue	None	2-90" RCP near Oak Grove Ave	nue
Disruption to Communities	Displacements	Potential impact on properties due to ultimate ROW requirements and grade separations	Low; Nominal width for this option is 79'. Approximately 20% of subsection has existing ROW between 70'-79' and 80% is over 80'	Low; Nominal width for this option is 85'. Approximately 20% of subsection has existing ROW <80', and 80% is over 90'	High; Nominal width for this option is 96'. Approximately 20% of subsection has existing ROW <90', 10% is between 90'-99' and 70% is over 100', impacts due to grade separations at Broadway, Oak Grove Avenue, North Lane, South Lane, Howard Avenue, Bayswater Avenue and Peninsula Avenue	Low; Nominal width for this option is 96'. Approximately 20% of subsection has existing ROW <90', 10% is between 90'-99' and 70% is over 100'	Low; Nominal width for this option is 96'. Approximately 20% of subsection has existing ROW <90", 10% is between 90'-99' and 70% is over 100', Possibly some due to ventilation structures



Subsection 3 continued

	Evaluation Meas	LIFO	3C &	3D - North of Villa Terrace to	North of Hayward Park St	ation	3E - North of Hayward Park Station to North of Highway 92
	Evaluation Meas	ui e	Aerial Viaduct	Berm	Open Trench	Covered Trench/Tunnel	At Grade
	Maximize ridership / revenue	Travel time	Same for all options				Same for all options
	potential	Route length	Same for all options				Same for all options
	Maximize connectivity and accessibility	Intermodal connections	Not applicable				Not applicable
Design Objectives	Minimize operating and capital	Operating and Maintenance (O&M) costs (relative costs associated with different vertical alignment options)	Higher than Berm option, due to aerial structure	Lowest	Higher than Berm option, due to retaining walls, drainage, etc	Higher than Open Trench option, due to ventilation, life safety, etc	Low
	costs	Capital cost (\$ 2009), does not include ROW	265 <u>313</u> million	-	425 405 million	894 million	30 million
		Acquisition cost of additional ROW	Medium	Medium Medium Lowest		Highest	
	Development potential for TOD within walking distance of station	Development potential for TOD within 1/2 mile of station location	Not applicable	Not applicable			
Land Use	Consistency with other planning efforts and adopted plans	Qualitative analysis of applicable planning and policy documents	Consistent with adopted plans and policies	Consistent with adopted plans and policies; strong local opposition to this type of structure; the berm structure (wall) would create a perceived barrier through this area which is not consistent with the local communities' character and land uses			Consistent with adopted plans and policies
Constructability	Constructability, access for construction, within existing transportation ROW (does not include station constructability impacts)	Need for temporary construction easements (TCE)	High; Nominal width with TCE for this option is 103'. Approximately 70% of existing ROW less than 100'	High; Nominal width with TCE for this option is 109'. Approximately 70% of existing ROW less than 100'	High; Nominal width with TCE for this option is 120'. Approximately 70% of existing ROW less than 100'	High; Nominal width with TCE for this option is 120'. Approximately 70% of existing ROW less than 100'	Low; Construction would primarily occur within ultimate ROW
	Disruption to existing railroads	Identify existing freight rail and other rail service connections	None				None
	Disruption / relocation of utilities	Identify major utilities requiring relocation	None		10' wide storm drain near Villa 1	errace	None
Disruption to Communities	Displacements	Potential impact on properties due to ultimate ROW requirements and grade separations	Medium; Nominal width for this option is 79'. Approximately 15% of subsection has existing ROW <70', 20% is between 70'-79' and 65% is over 80'	Medium; Nominal width for this option is 85'. Approximately 35% of subsection has existing ROW <80', 15% is between 80'-89' and 50% is over 90'	Medium; Nominal width for this option is 96'. Approximately 50% of subsection has existing ROW <90', 15% between 90'-99' and 35% over 100'	Medium; Nominal width for this option is 96'. Approximately 50% of subsection has existing ROW <90', 15% is between 90'-99' and 35% is over 100', Possible impacts due to ventilation structures	Low; Nominal width for this option is 96'. Existing ROW is over 100' throughout this subsection
	Properties with access affected	Properties with access affected	Access for properties affected due to ultimate ROW requirements	Access for properties affected due to ultimate ROW requirements	Access for properties affected di requirements	ue to ultimate ROW	None



Table 4-7 Summary Comparison of Design Options for Subsection 4 – San Mateo, Belmont, San Carlos, Redwood City

	Frankrich Marie		4A - North of Highv 25th A		4B - South of 25th Avenue to South of Cordilleras Creek					
	Evaluation Measu	ure -	At Grade	Berm	Aerial Viaduct	Berm	At Grade	Covered Trench/Tunnel	Deep Tunnel (HST Only)	
	Maximize ridership /	Travel time	Same for all options	Same for all options	Same for all options	3				
	revenue potential	Route length	Same for all options	Same for all options	Same for all options	S				
	Maximize connectivity and accessibility	Intermodal connections	Not applicable	Not applicable	Not applicable					
Design Objectives	Minimize operating and	Operating and Maintenance (O&M) costs (relative costs associated with different vertical alignment options)	Low	Low	Higher than Berm and At Grade options, due to aerial structure	Lowest	Lowest	Higher than other options, due to ventilation, life safety, etc	Higher than other options, due to ventilation, life safety, etc	
	capital costs	Capital cost (\$ 2009), does not include ROW	-	40 million	431 523 million	229-1,635 million	787 229-1,635 million	1,742 million	1,635 million	
		Acquisition cost of additional ROW	Highest	Medium	Medium	Medium	Highest	Lowest	Lowest	
Landlica	Development potential for TOD within walking distance of station	Development potential for TOD within 1/2 mile of station location	Not applicable	Not applicable	Not applicable					
Compl	Consistency with other planning efforts and adopted plans	Qualitative analysis of applicable planning and policy documents	Consistent with adopted plans and policies	Consistent with adopted plans and policies	Consistent with adopted plans and policies					
Constructability	Constructability, access for construction, within existing transportation ROW (does not include station constructability impacts)	Need for temporary construction easements (TCE)	Low; Construction would primarily occur within ultimate ROW; distance from Highway 92 to 25th Avenue is too short to make transition to aerial	Medium; Nominal width with TCE for this option is 107'. Approximately 70% of subsection has existing ROW less than 100'	Medium; Nominal width with TCE for this option is 102'. Approximately 55% of existing ROW less than 100'	Medium; Nominal width with TCE for this option is 107'. Approximately 55% of existing ROW less than 100'	Low; Construction would primarily occur within ultimate ROW	Medium; Nominal width with TCE for this option is 116'. Approximately 55% of existing ROW less than 100'	Construction would primarily occur within ultimate ROW; TCE required at tunnel portal locations	
	Disruption to existing railroads	Identify existing freight rail and other rail service connections	None	None	None					
	Disruption / relocation of utilities	Identify major utilities requiring relocation	None	None	None			60" Storm drain pipe near Harbor Boulevard	None	
Disruption to Communities	Displacements	Potential impact on properties due to ultimate ROW requirements and grade separations	Low; Nominal width for this option is 96'. Approximately 70% of subsection has existing ROW <80' and 30% over 100', impacts due to grade separation at 25th Avenue	Low; Nominal width for this option is 85'. Approximately 70% of subsection has existing ROW <80' and 30% over 100', impacts	Low; Nominal width for this option is 79'. Approximately 20% of subsection has existing ROW <70', 10% between 70'-79', and 70% over 80'	Low; Nominal width for this option is 85'. Approximately 30% of subsection has existing ROW <80', 10% between 80'-89' and 60% over 90'	Medium; Nominal width for this option is 96'. Approximately 40% of subsection has existing ROW <90', 20% between 90'-99' and 40% over 100', impacts due to grade adjustments at Ralston Avenue, Harbor Boulevard and Holly Street	Low; Nominal width for this option is 96'. Approximately 40% of subsection has existing ROW <90', 20% between 90'-99' and 40% over 100'	Low; Possibly some impacts due to ventilation structures	

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

Subsection 4 (continued)

			4C - S	outh of Cordil	leras Creek to	o North of Woodside	e Road	4D - North of Woodside Road to North of 5th Avenue						
	Evaluation Measu	re	Aerial Viaduct	Berm	Open Trench	Covered Trench/Tunnel	Deep Tunnel (HST Only)	Aerial Viaduct (HST Only)	Berm	At Grade (Caltrain Only)	Open Trench (HST Only)	Covered Trench/Tunnel (HST Only)	Deep Tunnel (HST Only)	
	Maximize ridership /	Travel time	Same for all options	Same for all options	Same for all op	•	(Same for all options	Same for all options		Same for all options			
	revenue potential	Route length	Same for all options	Same for all options	Same for all op	otions		Same for all options	Same for all options	Same for all opt	ions			
	Maximize connectivity and accessibility	Intermodal connections	Not applicable	Not applicable	Not applicable			Same for all options	Same for all options	Same for all opt	Same for all options			
Design Objectives	Minimize operating and capital costs	Operating and Maintenance (O&M) costs (relative costs associated with different vertical alignment options)	Higher than Berm option, due to aerial structure	Lowest	Higher than Berm option, due to retaining walls, drainage, etc	Higher than Open Trench option, due to ventilation, life safety, etc	Higher than Open Trench option, due to ventilation, life safety, etc	Higher than Berm and At Grade options, due to aerial structure	Lowest	Lowest	Higher than Berm option, due to retaining walls, drainage, etc	Higher than Open Trench option, due to ventilation, life safety, etc	Higher than Open Trench option, due to ventilation, life safety, etc	
		Capital cost (\$ 2009), does not include ROW	157-447 200- 481 million	-	325 308 million	765 million	447 481 million	37 70 million	-	37 <u>70</u> -159 million	- <mark>112</mark> <u>79</u> million	159 million	128 million	
		Acquisition cost of additional ROW	Medium	Medium	Medium	Lowest	Lowest	Medium	Medium	Highest	Medium	Lowest	Lowest	
	Development potential for TOD within walking distance of station	Development potential for TOD within 1/2 mile of station location	Same for all options except Deep Tunnel (Potential Redwood City station in this subsection)	Same for all options except Deep Tunnel (Potential Redwood City station in this subsection)	Same for all options except Deep Tunnel (Potential Redwood City station in this subsection)			Not applicable	Not applicable	Not applicable				
Land Use	Consistency with other planning efforts and adopted plans	Qualitative analysis of applicable planning and policy documents	Consistent with adopted plans and policies	Inconsistent with adopted plans and policies; strong local opposition to this type of structure; the berm structure (wall) would create a perceived barrier through this area which is not consistent with the local communities' character and	Inconsistent wi	ith adopted plans and pol	licies	Consistent with adopted plans and policies	Inconsistent with adopted plans and policies; strong local opposition to this type of structure; the berm structure (wall) would create a perceived barrier through this area which is not consistent with the local communities' character and	Inconsistent with adopted plans and policies				



Table 4-8 Summary Comparison of Design Options for Subsection 5 – Atherton, Menlo Park

				f 5th Avenue 5th Avenue		5B - S	South of 5th Avenue	to South of Ravens	wood Avenue	
	Evaluation Meas	sure	At Grade	Deep Tunnel (HST Only)	Aerial Viaduct	Berm	At Grade	Open Trench	Covered Trench/Tunnel	Deep Tunnel (HST Only)
	Maximize ridership /	Travel time	Same for all option		Same for all options	Same for all options	Same for all options	Open Trench	Trenent runner	(1131 Offiny)
	revenue potential	Route length	Same for all opti	ons	Same for all options	Same for all options	Same for all options			
	Maximize connectivity and accessibility	Intermodal connections	Not applicable		Not applicable	Not applicable	Not applicable			
Design Objectives	Minimize operating and	Operating and Maintenance (O&M) costs (relative costs associated with different vertical alignment options)	Low	Higher than At Grade option, due to ventilation, life safety, etc	Higher than Berm and At Grade options, due to aerial structure	Lowest	Lowest	Higher than Berm and At Grade options, due to retaining walls, drainage, etc	Higher than Open Trench option, due to ventilation, life safety, etc	Higher than Open Trench option, due to ventilation, life safety, etc
	capital costs	Capital cost (\$ 2009), does not include ROW	11-160 million	160 million	168-690 <u>224-690</u> million	-	98-563 million	355-867 <u>337-772</u> million	833-998 million	563-998 million
		Acquisition cost of additional ROW	Highest	Lowest	Medium	Medium	Highest	Medium	Lowest	Lowest
	Development potential for TOD within walking distance of station	Development potential for TOD within 1/2 mile of station location	Not applicable		Not applicable	Not applicable	Not applicable			
Land Use	Consistency with other planning efforts and adopted plans	Qualitative analysis of applicable planning and policy documents	Consistent with adopted plans and policies	Consistent with adopted plans and policies	Consistent with adopted plans and policies	Consistent with adopted plans and policies; Strong local opposition to this type of structure; the berm structure (wall) would create a perceived barrier through this area which is not consistent with the local communities' character and land uses	Consistent with adopted plans and policies			
Constructability	Constructability, access for construction, within existing transportation ROW (does not include station constructability impacts)	Need for temporary construction easements (TCE)	Low; Construction would primarily occur within ultimate ROW	Low; Construction would primarily occur within ultimate ROW; TCE required at tunnel portal locations	Medium; Nominal width with TCE for this option is 103'. Existing ROW less than 100' throughout this subsection	Medium; Nominal width with TCE for this option is 109'. Existing ROW less than 100' throughout this subsection	Low; Construction would primarily occur within ultimate ROW	Medium; Nominal width with TCE for this option is 120'. Existing ROW less than 100' throughout this subsection	Medium; Nominal width with TCE for this option is 120'. Existing ROW less than 100' throughout this subsection	Low; Construction would primarily occur within ultimate ROW; TCE required at tunnel portal locations
	Disruption to existing railroads	Identify existing freight rail and other rail service connections	None		None	None	None			
	Disruption / relocation of utilities	Identify major utilities requiring relocation	None		None	None	None			

Subsection 6 Continued

				6B - 5	South of Embarcadero Roa	nd to South of Churchi	II Avenue		
	Evaluation Measu	re	Aerial Viaduct	Berm	At Grade	Open Trench	Covered Trench/Tunnel	Deep Tunnel (HST Only)	
	Maximize ridership / revenue	Travel time	Same for all options	Same for all options	Same for all options		•		
	potential	Route length	Same for all options	Same for all options	Same for all options				
	Maximize connectivity and accessibility	Intermodal connections	Not applicable	Not applicable	Not applicable				
Design Objectives	Minimize operating and	Operating and Maintenance (O&M) costs (relative costs associated with different vertical alignment options)	Higher than Berm and At Grade options, due to aerial structure	Lowest	Lowest	Higher than Berm and At Grade options, due to retaining walls, drainage, etc	Higher than Open Trench option, due to ventilation, life safety, etc	Higher than Open Trench option, due to ventilation, life safety, etc	
	capital costs	Capital cost (\$ 2009), does not include ROW	52	-	41-176 million	123 116 million	321 million	176-184 million	
		Acquisition cost of additional ROW	Medium	Medium	Highest	Medium	Lowest	Lowest	
	Development potential for TOD within walking distance of station	Development potential for TOD within 1/2 mile of station location	Not applicable	Not applicable	Not applicable				
Land Use	Consistency with other planning efforts and adopted plans	Qualitative analysis of applicable planning and policy documents	Consistent with adopted plans and policies	Consistent with adopted plans and policies; Strong local opposition to this type of structure; the berm structure (wall) would create a perceived barrier through this area which is not consistent with the local communities' character and land uses	Consistent with adopted plans and policies				
Constructability	Constructability, access for construction, within existing transportation ROW (does not include station constructability impacts)	Need for temporary construction easements (TCE)	Low; Nominal width with TCE for this option is 103'. Existing ROW less than 100' throughout this subsection. Public ROW is available	Low; Nominal width with TCE for this option is 109'. Existing ROW less than 100' throughout this subsection. Public ROW is available	Low; Construction would primarily occur within ultimate ROW	Low; Nominal width with TCE for this option is 120'. Existing ROW less than 100' throughout this subsection. Public ROW is available	Low; Nominal width with TCE for this option is 120'. Existing ROW less than 100' throughout this subsection. Public ROW is available	Low; Construction would primarily occur within ultimate ROW; TCE required at tunnel portal locations	
	Disruption to existing railroads	Identify existing freight rail and other rail service connections	Not applicable	Not applicable	Not applicable				
Dis	Disruption / relocation of utilities	Identify major utilities requiring relocation	None	None	None	Two 24" RCP water lines near Churchill Avenue	Two 24" RCP water lines near Churchill Avenue	None	



CALIFORNIA HIGH-SPEED TRAIN PROJECT EIR/EIS PRELIMINARY ALTERNATIVES ANALYSIS SAN FRANCISCO TO SAN JOSE SECTION

Subsection 6 Continued

				6C - Sou	th of Churchill Avenue to N	orth of East Meadow Drive			
	Evaluation Meas	sure					Deep Tunnel		
			Aerial Viaduct	At Grade	Open Trench	Covered Trench/Tunnel	(HST Only)		
	Maximize ridership / revenue	Travel time	Same for all options						
	potential	Route length	Same for all options						
	Maximize connectivity and accessibility	Intermodal connections	Not applicable	T	Ţ				
Design Objectives	Minimize operating and capital	Operating and Maintenance (O&M) costs (relative costs associated with different vertical alignment options)	Low	Lowest	Higher than At Grade options, due to retaining walls, drainage, etc	Higher than Open Trench option, due to ventilation, life safety, etc	Higher than Open Trench option, due to ventilation, life safety, etc		
	costs	Capital cost (\$ 2009), does not include ROW	133 <u>171</u> -406 million	46-302 million	278 <u>263</u> million	694 million	302-406 million		
		Acquisition cost of additional ROW	Medium	Highest	Medium Lowest		Lowest		
Land Use	Development potential for TOD within walking distance of station	Development potential for TOD within 1/2 mile of station location	Not applicable						
Land Use	Consistency with other planning efforts and adopted plans	Qualitative analysis of applicable planning and policy documents	Consistent with adopted plans and policies						
Constructability	Constructability, access for construction, within existing transportation ROW (does not include station constructability impacts)	Need for temporary construction easements (TCE)	Low; Nominal width with TCE for this option is 103'. Approximately 50% of existing ROW over 100'. Public ROW is available	Low; Construction would primarily occur within ultimate ROW	Low; Nominal width with TCE for this option is 120'. Approximately 50% of existing ROW over 100'. Public ROW is available	Low; Nominal width with TCE for this option is 120'. Approximately 50% of existing ROW over 100'. Public ROW is available	Low; Construction would primarily occur within ultimate ROW; TCE required at tunnel portal locations		
	Disruption to existing railroads	Identify existing freight rail and other rail service connections	Not applicable						
	Disruption / relocation of utilities	Identify major utilities requiring relocation	Not applicable						
	Displacements	Potential impact on properties due to ultimate ROW requirements and grade separations	Low; Nominal width for this option is 79'. Existing ROW is >80' throughout this subsection	Low; Nominal width for this option is 96'. Approximately 55% of subsection has existing ROW <90' and 45% is over 100'	Low; Nominal width for this option is 96'. Approximately 55% of subsection has existing ROW <90' and 45% is over 100'	Low; Nominal width for this option is 96'. Approximately 55% of subsection has existing ROW <90' and 45% is over 100'; Possibly some due to ventilation structures	Low; Possibly some due to ventilation structures		
Disruption to Communities	Properties with access affected	Properties with access affected	None						
	Local traffic effects around station	Increase in traffic congestion	Not applicable						
	Local traffic effects along alignment and at grade crossings	Identify streets with permanent loss of traffic lanes due to ultimate ROW requirements and identify traffic effects at grade crossings	Loss of 1 to 2 traffic lanes a	None					
Environmental Resources	Waterways and wetlands and natural preserves or	Waterways (acres of waterways within ultimate ROW)	Lower impacts than Trench options	Lower impacts than Trench options	0.25 acres	0.25 acres	Lower impacts than At-Grade option		



CALIFORNIA HIGH-SPEED RAIL AUTHORITY

Subsection 6 Continued

				6[) - North of East Meadow D	rive to North of Ado	be Creek		
	Evaluation Measu	ure	Aerial Viaduct	Berm	At Grade	Open Trench	Covered Trench/Tunnel	Deep Tunnel (HST Only)	
	Maximize ridership / revenue	Travel time	Same for all options	Same for all options	Same for all options				
	potential	Route length	Same for all options	Same for all options	Same for all options				
	Maximize connectivity and accessibility	Intermodal connections	Not applicable	Not applicable	Not applicable				
Design Objectives	Minimize operating and capital	Operating and Maintenance (O&M) costs (relative costs associated with different vertical alignment options)	Higher than Berm and At Grade options, due to aerial structure	Lowest	Lowest	Higher than Berm and At Grade options, due to retaining walls, drainage, etc	Higher than Open Trench option, due to ventilation, life safety, etc	Higher than Open Trench option, due to ventilation, life safety, etc	
	costs	Capital cost (\$ 2009), does not include ROW	44 <u>59</u> -154 million	-	112-186 <u>72-184</u> million	112 105 million	272 million	154- <mark>186 <u>184</u> million</mark>	
		Acquisition cost of additional ROW	Medium	Medium	Highest	Medium	Lowest	Lowest	
	Development potential for TOD within walking distance of station	Development potential for TOD within 1/2 mile of station location	Not applicable	Not applicable	Not applicable				
Land Use	Consistency with other planning efforts and adopted plans	Qualitative analysis of applicable planning and policy documents	Consistent with adopted plans and policies	Consistent with adopted plans and policies; Strong local opposition to this type of structure; the berm structure (wall) would create a perceived barrier through this area which is not consistent with the local communities' character and land uses	rm ald Consistent with adopted plans and policies				
Constructability	Constructability, access for construction, within existing transportation ROW (does not include station constructability impacts)	Need for temporary construction easements (TCE)	Low; Nominal width with TCE for this option is 103'. Approximately 75% of existing ROW over 100'. Public ROW is available	Low; Nominal width with TCE for this option is 109'. Approximately 75% of existing ROW over 100'. Public ROW is available	Low; Construction would primarily occur within ultimate ROW	Low; Nominal width with TCE for this option is 120'. Approximately 75% of existing ROW over 100'. Public ROW is available	Low; Nominal width with TCE for this option is 120'. Approximately 75% of existing ROW over 100'. Public ROW is available	Low; Construction would primarily occur within ultimate ROW; TCE required at tunnel portal locations	
	Disruption to existing railroads	Identify existing freight rail and other rail service connections	Not applicable	Not applicable	Not applicable				
	Disruption / relocation of utilities	Identify major utilities requiring relocation	Not applicable	Not applicable	Not applicable				

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

Table 4-10 Summary Comparison of Design Options for Subsection 7 – Mountain View, Sunnyvale

	Fuel vetien Mass	l ma		7A & 7B - North o	f Adobe Creek to North of Ste	evens Creek				
	Evaluation Measu	ure	Aerial Viaduct	Berm	At Grade	Open Trench	Covered Trench/Tunnel			
	Maximize ridership / revenue	Travel time	Same for all options	Same for all options	Same for all options					
	potential	Route length	Same for all options	Same for all options	Same for all options					
	Maximize connectivity and accessibility	Intermodal connections	Same for all options	Same for all options	Same for all options					
Design Objectives	Minimize operating and	Operating and Maintenance (O&M) costs (relative costs associated with different vertical alignment options)	Higher than Berm and At Grade options, due to aerial structure	Lowest	Lowest	Higher than Berm and At Grade options, due to retaining walls, drainage, etc	Higher than Open Trench option, due to ventilation, life safety, etc			
	capital costs	Capital cost (\$ 2009), does not include ROW	344 <u>424</u> million	-	155 <u>154</u> million	615 <u>583</u> million	1,433 million			
		Acquisition cost of additional ROW	Medium	Medium	Highest	Medium	Lowest			
	Development potential for TOD within walking distance of station	Development potential for TOD within 1/2 mile of station location	Same for all options (Potential Mountain View HST station in this subsection)	Same for all options (Potential Mountain View HST station in this subsection)	Same for all options (Potential Mo	s subsection)				
Land Use	Consistency with other planning efforts and adopted plans Qualitative analysis of applicable planning and policy documents		Consistent with adopted plans and policies	Consistent with adopted plans and policies; Strong local opposition to this type of structure; the berm structure (wall) would create a perceived barrier through this area which is not consistent with the local communities' character and land uses	Consistent with adopted plans and	nd policies				
Constructability	Constructability, access for construction, within existing transportation ROW (does not include station constructability impacts)	Need for temporary construction easements (TCE)	Low; Nominal width with TCE for this option is 103'. Approximately 60% of existing ROW over 100'. Public ROW is available	Low; Nominal width with TCE for this option is 109'. Approximately 60% of existing ROW over 100'. Public ROW is available	Low; Construction would primarily occur within ultimate ROW	Low; Nominal width with TCE for this option is 120'. Approximately 60% of existing ROW over 100'. Public ROW is available	Low; Nominal width with TCE for this option is 120'. Approximately 60% of existing ROW over 100'. Public ROW is available			
Constructability	Disruption to existing railroads	Identify existing freight rail and other rail service connections	Not applicable	Not applicable	Not applicable					
	Disruption / relocation of utilities	Identify major utilities requiring relocation	Not applicable	Not applicable	Not applicable					
Disruption to Communities	Displacements	Potential impact on properties due to ultimate ROW requirements and grade separations	Low; Nominal width for this option is 79'. Exiting ROW is >90' throughout this subsection	Low; Nominal width for this option is 85'. Exiting ROW is >90' throughout this subsection	Medium; Nominal width for this option is 96'. Approximately 40% of subsection has exiting ROW between 90'-99' and 60% over 100' and impacts due to the grade separations at Rengstorff Avenue and Castro Street	Low; Nominal width for this option is 96'. Approximately 40% of subsection has exiting ROW between 90'-99' and 60% over 100'	Low; Nominal width for this option is 96'. Approximately 40% of subsection has exiting ROW between 90'-99' and 60% over 100'; Possibly some due to ventilation structures			
	Properties with access affected	Properties with access affected	None	None	Access for properties affected due to the grade separations at Rengstorff Avenue and Castro Street	None	None			

Subsection 7 Continued

	Evaluation Mea	asure		7C & 7D - North of	Stevens Creek to North	of Fair Oaks Avenue			
			Aerial Viaduct	Berm	At Grade	Open Trench	Covered Trench/Tunnel		
	Maximize ridership /	Travel time	Same for all options	Same for all options	Same for all options				
	revenue potential	Route length	Same for all options	Same for all options	Same for all options				
	Maximize connectivity and accessibility	Intermodal connections	Not applicable	Not applicable	Not applicable				
Design Objectives	Minimize operating and	Operating and Maintenance (O&M) costs (relative costs associated with different vertical alignment options)	Higher than Berm and At Grade options, due to aerial structure	Lowest	Lowest	Higher than Berm and At Grade options, due to retaining walls, drainage, etc	Higher than Open Trench option, due to ventilation, life safety, etc		
	capital costs	Capital cost (\$ 2009), does not include ROW	99 219 million	-	107 <u>128</u> million	540- 510 million	1,323 million		
		Acquisition cost of additional ROW	Medium	Medium	Highest	Medium	Lowest		
	Development potential for TOD within walking distance of station	Development potential for TOD within 1/2 mile of station location	Not applicable	Not applicable	Not applicable				
Land Use	Consistency with other planning efforts and adopted plans Qualitative analysis of applicable planning and policy documents		Consistent with adopted plans and policies	Consistent with adopted plans and policies; Strong local opposition to this type of structure; the berm structure (wall) would create a perceived barrier through this area which is not consistent with the local communities' character and land uses	ed Consistent with adopted plans and policies				
Constructability	Constructability, access for construction, within existing transportation ROW (does not include station constructability impacts)	onstruction, within existing ansportation ROW (does of include station Need for temporary construction easements (TCE) for to App ROW		Low; Nominal width with TCE for this option is 109'. Approximately 85% of existing ROW is less than 100'. Public ROW is available	Low; Construction would primarily occur within ultimate ROW	Low; Nominal width with TCE for this option is 120'. Approximately 85% of existing ROW is less than 100'. Public ROW is available	Low; Nominal width with TCE for this option is 120'. Approximately 85% of existing ROW is less than 100'. Public ROW is available		
	Disruption to existing railroads	Identify existing freight rail and other rail service connections	Not applicable	Not applicable	Not applicable				
	Disruption / relocation of utilities	Identify major utilities requiring relocation	Not applicable	Not applicable	Not applicable				
Disruption to Communities	Displacements Potential impact on properties due to ultimate ROW requirements and Medium; Nominal width for the option is 79'. Approximately 10% of subsection has existing the control of the option is 79'.		10% of subsection has existing ROW <70', 60% between 70'-	Medium; Nominal width for this option is 85'. Approximately 70% of subsection has existing ROW <80', 10% between 80'-89' and 20% over 90'	Medium; Nominal width for this option is 96'. Approximately 80% of subsection has existing ROW <90', 5% between 90'-99' and 15% over 100'; impacts due to grade separations at Mary Avenue and Sunnyvale Avenue	Medium; Nominal width for this option is 96'. Approximately 80% of subsection has existing ROW <90', 5% between 90'-99' and 15% over 100'	Medium; Nominal width for this option is 96'. Approximately 80% of subsection has existing ROW <90', 5% between 90'-99' and 15% over 100'; Possibly some due to ventilation structures		
	Properties with access affected	PRODUCES WITH ACCESS ATTACHED I NODE		None	Access for properties affected due to the grade separations at Mary Avenue and Sunnyvale Avenue	None	None		



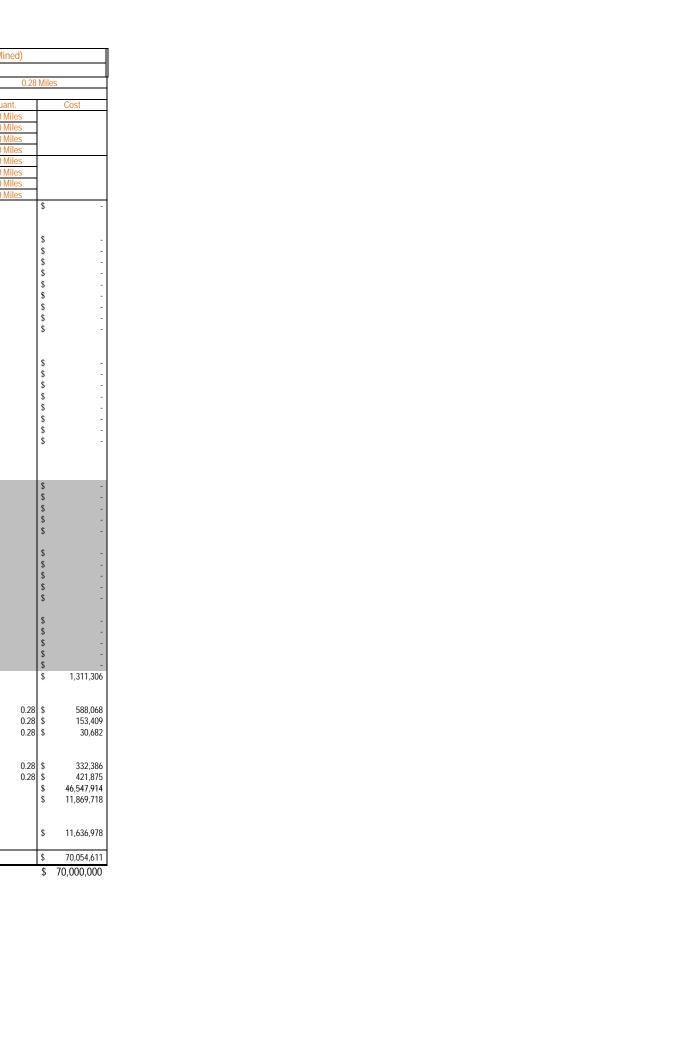
	0A (2.2 miles)	OB (2.2 miles)	OC (1.0 miles)	0D (2.3 miles)
Subsection 0	Covered Trench/ Tunnel	Covered Trench/Tunnel	At Grade	Covered Trench/ Tunnel
Capital Cost (in Millions) does not include ROW	\$3,000 (\$YOE) (Estimate provided by the TJPA, 2010)	\$3,000 (\$YOE) (Estimate provided by the TJPA, 2010)	\$200 (\$YOE)	\$3,000+ (\$YOE)
Acquisition Cost of Permanent ROW	Medium	Medium	Lowest	Highest
Notes:	1. Inclusive of train box and station (in year of expenditure \$) 2. Includes \$100M for reconstruction of 4th & King. 3. Assumed CHSRA contribution of \$1B from CHSRA 2009 Business Plan.	Assumed HST contribution of \$1B towards the total construction costs.	1. Based on MTC SF/Silicon Investment Strategy dated June 2009. 2. Assumed costs to be doubled that of the 2 platform option.	1. Inclusive of train box and station (in year of expenditure \$) 2. Includes \$100M for reconstruction of 4th & King. 3. \$3 billion cost based on TTC estimate for 2.2 mile tunnel and terminal.

	1A (0.3	3 miles)	1B & 1C((1.0 miles)	1D, 1E, 1F &	1G (3.5 miles)
Subsection 1	At Grade	Covered Trench/ Tunnel	At Grade	Covered Trench/ Tunnel	At Grade	Covered Trench/ Tunnel
Capital Cost (\$2009 in Millions) does not include ROW	\$44 (2 tracks)	\$70 (2 tracks)	\$21 (2 tracks)	\$278 (2 tracks)	\$ <u>458</u> <u>483</u> (4 tracks) \$71 (2 tracks)	\$978 (2 tracks)
Acquisition Cost of Permanent ROW	Lowest	Medium	Lowest	Lowest	Highest	Lowest
Notes:	2 tracks - 1. Grade separations at Common St and 16th St; 2. ROW take considers the parcels impacted by new grade separations; 3. Two tracks on existing Caltrain alignment for approach to 4th/King station. Must be combined with 2 track covered trench/tunnel option.	2 tracks - 1. Two tracks on new alignment for approach to TTC; Must be combined with 2 track at grade option. 2. Alignment under 7th St.	2 tracks - 1. Two tracks on existing Caltrain alignment for approach to 4th/King station. <i>Must be combined with 2 track covered trench/tunnel option.</i>	2 tracks - 1. Drilled & blast tunneling method; 2. Two tracks on new alignment for approach to TTC. Must be combined with 2 track at grade option.	4 tracks - 1. Two tracks on existing Caltrain alignment for approach to 4th/King station. 2. Two tracks on new alignment for approach to TTC using combination of tunneling and aerial structures. 3. Caltrain Bayshore Station. 2 tracks - 1. Two tracks on existing Caltrain alignment for approach to 4th/King station. <i>Must be combined with 2 track covered trench/tunnel option.</i> 2. Caltrain Bayshore Station.	2 tracks - 1. Drilled & blast tunneling method; 2. Two tracks on new alignment for approach to TTC. Must be combined with 2 track at grade option.

	COST ELEMENTS	UNIT	UNIT PRICE		At-Grade	(2 tracks)			Tunnel (2 tra	acks - Mined)	
Content Cont	Subsection 1		Base: 2009 (3rd	Ctort 200 00			Miles	Ctart 200 00			
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Substitute Sub			1				Cost				Cost
Some none from Part Part Some none from					End: 215 + 00				End: 0 + 00		
Section 1.5 Text Color Text									End: 215 ± 00		
Fig. 17 1.5	, ,								L11u. 215 + 00		
Section Company Comp				Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Figure Trans Form State Fo									F 1 0 00		
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A Double From Section - In Traces Mare			\$ 4,700,160								-
Performance											1,335,273
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Single Trade - Value	,					_	*				-
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To Friend Strage Front - Al Create							•] _].	
Enthronic Rens Chercology September											-
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Spranger											624,476
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S S S S S S S S S S											7,373
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Standard Shrutture (Atroxks)	Structures, Tunnels, Walls										ļ
2 Piligh Structure											-
Strong Span Structure			\$ 52,459,008			0.00	\$ -			0.00 \$	-
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Street S	4 Waterway Crossing - Primary	Mile	\$ 85,342,208				\$ -			\$	-
Time Single Track TBM (xi Chilles)						0.00	\$ -			0.00 \$	-
S Two Single Track TBM w/3rd Tube (-6 Miles) Mile S 176,720,896 S 0.00 S							\$ -			\$	-
9 Double Track Drill & Blast Mile \$ 144,887,880 0.00 \$. 0.00 \$ 1											-
Double Track TBM (-6 Miles)	9 Double Track Drill & Blast	Mile	\$ 146,887,680			0.00	\$ -			0.00 \$	-
Double Track TBM w/3rd Tube (-64 Miles)							\$ -			\$	-
11 Seismic Chamber (Orill & Blast/Mined)							\$ - \$			\$	-
12 Crossovers			\$ 126,205,952				\$ -			\$	-
14 Trench Long (2 tracks) (1000 + ft) Mile \$ 57,524,224 0.00 \$	12 Crossovers	ea	\$ 442,368				*			*	-
Trench Long (a tracks) (1000 + ft) Mile S 86,286,336 Mile S 78,843,904 S 78,944,904 S											37,285,818
15 Trench Short (2 tracks) (<1000 ft) Mile S 78,843,904 S C C C C C C C C C						0.00	.			0.00 \$	-
Trench Short (4 tracks) (< 1000 ft)							\$ -			\$	-
17 Retaining Walls	Trench Short (4 tracks) (<1000 ft)	Mile	\$ 118,265,856							[
18 Containment Walls Mile \$ 5,907,456 \$ \$ - \$ \$ \$ 19 Single Track Cut and Cover Subway Mile \$ 131,246,080 \$ \$ - \$ \$ \$ Four Track Drill & Blast Mile \$ 293,775,360 \$ \$ - \$ \$ \$ Four Track Mined (Soft Soil) \$ 158,400,000 \$ \$ - \$ \$ \$ Four Track TBM (<6 Miles) Mile \$ 158,400,000 \$ \$ - \$ \$ Four Track TBM (<6 Miles) \$ 158,400,000 \$ \$ - \$ \$ Four Track TBM w/3rd Tube (<6 Miles) Mile \$ 353,441,792 \$ \$ - \$ \$ Four Track Cut & Cover Tunnel Mile \$ 262,492,160 0.000 \$ - \$ \$ Grade Separations 1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban) ea \$ 13,284,352 2 \$ 26,568,704 \$ \$ Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) ea \$ 19,926,528 \$ - \$ 2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) ea \$ 2,759,680 0 \$ - \$ 3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Urban) ea \$ 2,029,568 \$ - \$ 4 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban) ea \$ 3,563,520 0 \$ - \$ 5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban) ea \$ 3,563,520 0 \$ - \$ 5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban) ea \$ 3,563,520 0 \$ - \$ 5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban) ea \$ 3,593,216 \$							*				3,366,109
19 Single Track Cut and Cover Subway						0.00	\$ - \$ -			0.00 \$	-
Four Track Drill & Blast			\$ 131,246,080				\$ -			\$	-
Four Track TBM (<6 Miles) Four Track TBM w/3rd Tube (>6 Miles) Four Track TBM w/3rd Tube (>6 Miles) Four Track Cut & Cover Tunnel Mile S 353,441,792 S - S - S - S - S - S - S - S - S - S -	Four Track Drill & Blast	Mile	\$ 293,775,360				\$ -			\$	-
Four Track TBM w/3rd Tube (>6 Miles) Four Track Cut & Cover Tunnel Grade Separations Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Urban) Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Urban) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Urban) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban) Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban) Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban) Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban) Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban) Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban) Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban) Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban) Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban) Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban) Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban) Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban) Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban) Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban) Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban) Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban) Roadway Crossing HSR - 4 Lane Roadway Cro							\$ -			\$	-
Four Track Cut & Cover Tunnel							*			\$	-
Grade Separations	, ,						*			\$	-
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban) ea \$ 13,284,352 2 \$ 26,568,704 \$ \$ 2 Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) ea \$ 19,926,528 \$ - \$ \$ - Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) ea \$ 2,759,680 0 \$ - \$ \$ \$ Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Urban) ea \$ 3,563,520 \$ - \$ \$ - \$ \$ \$ Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban) ea \$ 3,563,520 0 \$ - 0 \$ \$ - 0 \$ \$ - 0 \$ \$ - \$ \$ \$ - 0 \$ \$ - 0 \$ \$ - \$ \$ \$ - \$ \$ \$ - \$ \$ \$ - \$ \$ \$ - \$ \$ \$ - \$ \$ \$ - \$ \$ \$ \$ - \$ \$ \$ \$ - \$ \$ \$ \$ \$ - \$ \$ \$ \$ - \$ \$ \$ \$ \$ - \$ \$ \$ \$ \$ \$ - \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$										[
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)			¢ 40.004.050			_	¢ 0/ E/0 70:				
2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) ea \$ 2,759,680 0 \$ - \$ \$ 3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) ea \$ 2,029,568 \$ - \$ - \$ \$ 4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban) ea \$ 3,563,520 0 \$ - 0 \$ 5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban) ea \$ 3,593,216 \$ -						-				\$	-
3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) ea \$ 2,029,568 \$ - \$ - \$ 0 \$ - </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>\$</td> <td>-</td>										\$	-
5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban) ea \$ 3,593,216 \$ \$ -	3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$ 2,029,568				\$ -			\$	-
											-
	5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea ea	\$ 3,593,216 \$ 2,850,816				*			0 \$	-
6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped) ea \$ 3,171,328 \$ - \$ \$ \$											-
7 Street Bridging HSR Trench \$ - \$											-

COST ELEMENTS	UNIT	UNIT PRICE	At-Grade (2 tracks)					Tunnel (2 tracks - Mined)		
Subsection 1		Base: 2009 (3rd			A				A	
		Quarter)	Start: 200 + 00	End: 215 + 00	0.28	Miles	Start: 200 + 00	End: 215 + 00	0.28	Miles
Subsection Details		I.			Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile)			Start: 200 + 00	End: 215 + 00	0.28 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile) Double Track Tunnel (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 200 + 00	End: 215 + 00	0.00 Miles 0.28 Miles	
Double Track Turner (Mile) Double Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00	E110: 215 + 00	0.28 Miles 0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Trench (Mile)	1	T	Start: 0 + 00		0.00 Miles	•	Start: 0 + 00		0.00 Miles	•
8 Minor Crossing Closures	ea	\$ 87,040				\$ -				\$
Building Items										
1 Intermediate Passenger Stations	Each	\$ -				\$ -				\$
2 Terminal Passenger Stations	Each	\$ -				\$ -				\$
Caltrain Passenger Station - At-Grade	Each	\$15,000,000				\$ -				\$
Caltrain Passenger Station - On Structure	Each	\$15,000,000				\$ -				\$
Caltrain Passenger Station - In Tunnel or Subway	Each	\$15,000,000				\$ -				\$
Caltrain Passenger Station - In Trench 3 Maintenance Facility	Each Each	\$15,000,000 \$ 123,921,884				\$ -				\$ \$
4 Parking - Structures	space					\$ -				\$
5 Parking - At Grade	space					\$ -				\$
	.,									
Rail & Utility Relocation										
1 Single Track Relocation (Temporary)	Mile	\$ 2,000,896				\$ -				\$
2 Single Track Relocation (Permanent)	Mile	\$ 2,000,896				\$ -				\$
Single Track Removal Major Utility Relocations - Dense Urban	Mile Mile	\$ 130,048 \$ 1,548,288				\$ -				\$ \$
5 Major Utility Relocations - Dense Orban	Mile	\$ 1,084,416				\$				\$
6 Major Utility Relocations - Dense Suburban	Mile	\$ 775,168				\$ -				\$
7 Major Utility Relocations - Suburban	Mile	\$ 464,896				\$ -				\$
8 Major Utility Relocations - Undeveloped	Mile	\$ 30,720				\$ -				\$
ROW (NOT INCLUDED)										
ROW required for each segment 1 Dense Urban	Acre	\$ 2,786,321				\$ -				\$
2 Urban	Acre	\$ 1,371,510				\$ -				\$
3 Dense Suburban	Acre	\$ 908,134				\$ -				\$
4 Suburban	Acre	\$ 208,418				\$ -				\$
5 Undeveloped	Acre	\$ 3,642				\$ -				\$
ROW required for Temp. Construction Easement										
1 Dense Urban	Acre					-				\$
2 Urban 3 Dense Suburban	Acre Acre					\$ -				\$
4 Suburban	Acre					\$ -				\$
5 Undeveloped	Acre					\$ -				\$
Right-of-Way Required for Stations, Maintenance & Parking Facilities										
6 Dense Urban	Acre	\$ 2,786,321				-				\$
7 Urban	Acre	\$ 1,371,510				\$ -				\$
8 Dense Suburban 9 Suburban	Acre Acre	\$ 908,134 \$ 208,418				\$ -				\$ \$
10 Undeveloped	Acre	\$ 208,418				\$ -				\$
Environmental Mitigation = 3% Line Costs		0,042				\$ 816,078				\$ 1,311,3
										,,-
System Elements		1.								
1 Signaling (ATC)	Mile	\$ 2,070,000			0.28				0.28	
2 Communications (w/ Fiber Optic Backbone) 3 Wayside Protection System	Mile Mile	\$ 540,000 \$ 108,000			0.28 0.28				0.28 0.28	
Jyvaysiue Fluteuliuli Systelli	IVIIIE	φ 100,000			0.28	ψ 30,082			0.28	φ 30,0
Electrification Items										
1 Traction Power supply	Mile	\$ 1,170,000			0.28				0.28	
2 Traction Power Distribution	Mile	\$ 1,485,000			0.28				0.28	
Subtotal						\$ 29,545,092				\$ 46,547,9
Program Implementation Costs (per screening)						\$ 7,533,998				\$ 11,869,7
Program Implementation Costs										
Contingencies (per screening) (25%)						\$ 7,386,273				\$ 11,636,9
J										
Subtotal			·	·	· · · · · · · · · · · · · · · · · · ·	\$ 44,465,363			·	\$ 70,054,6
Subtotal Rounded						\$ 44,000,000	•			\$ 70,000,00

Subtotal Rounded \$ 44,000,000 \$ 70,000,000



COST ELEMENTS	UNIT	UNIT PRICE			Grade		Tunnel (2 tracks - Mined)			
Subsection 1		Base: 2009	Start: 215 + 00	End: 255 + 00	B 0.76	Miles	Start: 215 + 00	End: 255 + 00	B 0.76 Mi	les
		(3rd Quarter)	Start. 213 1 00	E11d. 200 1 00	0.70	WIICS	Start. 213 1 00	E11d: 255 1 00	0.70 WII	103
Subsection Details			Ctt 21F 00	E-4 2EE 00	Quant.	Cost	Ctt 0 00	F1 0 00	Quant.	Cost
Oouble Track At-Grade (Mile) Oouble Track Elevated (Mile)			Start: 215 + 00 Start: 0 + 00	End: 255 + 00	0.76 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	
Pouble Track Elevated (Mile)			Start: 0 + 00		0.00 Miles		Start: 215 + 00	End: 255 + 00	0.76 Miles	
Oouble Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00	E11a. 255 1 00	0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
our Track Elevated (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
our Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
four Track Trench (Mile)		1	Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Section - Total 1 Double Track Section - At Grade	Mile	\$ 2,100,224			0.76	\$ 1,591,079			0.00 \$	
2 Double Track Section - At Grade	Mile	\$ 4,700,160			0.76				0.00 \$	
3 Double Track Section - In Tunnel or Subway	Mile	\$ 4,700,160			0.00				0.76 \$	
4 Double Track Section - In Trench	Mile	\$ 4,700,160			0.00				0.00 \$	
Four Track Section - Total										
Four-track Section - At Grade	Mile	\$ 4,200,448			0.00				0.00 \$	
Four-Track Section - On Structure	Mile	\$ 9,400,320				\$ -			0.00 \$	
Four-Track Section - In Tunnel or Subway	Mile	\$ 9,400,320				\$ -			0.00 \$	
Four-Track Section - In Trench	Mile	\$ 9,400,320			0.00	\$ -			0.00 \$	
Single Track - Total										
5 Single Track Section - At Grade	Mile	\$ 1,549,312			n	\$ -			0.00 \$	
6 Single Track Section - At Grade	Mile	\$ 2,350,080				\$ -			0.00 \$	
7 Single Track Section - In Tunnel or Subway	Mile	\$ 2,350,080				\$ -			0.00 \$	
8 Single Track Section - In Trench	Mile	\$ 2,350,080				\$ -			0.00 \$	
				[· ·					
9 Freight Double Track - At Grade	Mile	\$ 2,839,552		[\$ -			0.00 \$	
10 Freight Single Track - At Grade	Mile	\$ 1,549,312		[0	\$ -			0.00 \$	
Carthural Mana										
Earthwork Items 1 Site Preparation - Undeveloped	Acre	\$ 9,216			10.10	\$ 93,091			10.10 \$	93,091
2 Total Cut	CY	\$ 9,216 \$ 6			0.00				652666.00 \$	
3 Total Fill	CY	\$ 6			261066.00				261066.00 \$	
4 Borrow	CY	\$ 13			261066.00				0.00 \$	
5 Spoil	CY	\$ 13			0.00				391600.00 \$	
6 Landscape erosion Control	Acre	\$ 6,144			0.09				8.09 \$	
7 Security Fencing (Both sides of ROW)	Mile	\$ 144,384			0.76				0.00 \$	
8 Special Drainage Facilities	5% Ea			[\$ 256,464			\$	546,081
				[
Structures, Tunnels, Walls	N A:1 -	¢ 24.072.772			0.00	¢			0.00	
1 Standard Structure (2 tracks) Standard Structure (4 tracks)	Mile Mile	\$ 34,972,672			0.00				0.00 \$	
Standard Structure (4 tracks) 2 High Structure	Mile	\$ 52,459,008 \$ 40,424,448			0.00	\$ -			0.00 \$	
3 Long Span Structure	Mile	\$ 40,424,448				Š			\$	
4 Waterway Crossing - Primary	Mile	\$ 85,342,208				\$ -			¢	
5 Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$ 92,049,408			0.00	\$ -				
6 Twin Single Track Drill&Blast (<6 Miles)	Mile	\$ 142,731,264			5.50	\$ -			l s	
7 Twin Single Track TBM (<6 Miles)	Mile	\$ 106,637,312				\$ -			\$	
8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$ 176,720,896				\$ -			\$	
9 Double Track Drill & Blast	Mile	\$ 146,887,680			0.00	\$ -			0.76 \$	111,278,545
10 Double Track Mined (Soft Soil)	Mile	\$ 79,200,000				\$ -			\$	
Double Track TBM (<6 Miles)	Mile	\$ 106,637,312				-				
Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 176,720,896				\$ -				
11 Seismic Chamber (Drill & Blast/Mined)	ea	\$ 126,205,952				\$ -			[\$	
	ea	\$ 442,368	Ī			\$ -			\$	
					0.00	¢		Ī	0.00 \$	
13 Cut & Cover Double Track Tunnel	Mile	\$ 131,246,080			0.00					
13 Cut & Cover Double Track Tunnel 14 <mark>Trench Long (2 tracks) (1000 + ft)</mark>	Mile Mile	\$ 131,246,080 \$ 57,524,224			0.00				\$	
13 Cut & Cover Double Track Tunnel 14 Trench Long (2 tracks) (1000 + ft) Trench Long (4 tracks) (1000 + ft)	Mile Mile Mile	\$ 131,246,080 \$ 57,524,224 \$ 86,286,336							\$	
15 Trench Short (2 tracks) (<1000 ft)	Mile Mile Mile Mile	\$ 131,246,080 \$ 57,524,224 \$ 86,286,336 \$ 78,843,904							\$	
13 Cut & Cover Double Track Tunnel 14 Trench Long (2 tracks) (1000 + ft) Trench Long (4 tracks) (1000 + ft)	Mile Mile Mile	\$ 131,246,080 \$ 57,524,224 \$ 86,286,336							\$ \$ 0.76 \$	
13 Cut & Cover Double Track Tunnel 14 Trench Long (2 tracks) (1000 + ft) Trench Long (4 tracks) (1000 + ft) 15 Trench Short (2 tracks) (<1000 ft) Trench Short (4 tracks) (<1000 ft)	Mile Mile Mile Mile Mile	\$ 131,246,080 \$ 57,524,224 \$ 86,286,336 \$ 78,843,904 \$ 118,265,856				\$ - \$ -			0.76 \$	
13 Cut & Cover Double Track Tunnel 14 Trench Long (2 tracks) (1000 + ft) Trench Long (4 tracks) (1000 + ft) 15 Trench Short (2 tracks) (<1000 ft) 16 Mechanical & Electrical for Tunnels	Mile Mile Mile Mile Mile Mile	\$ 131,246,080 \$ 57,524,224 \$ 86,286,336 \$ 78,843,904 \$ 118,265,856 \$ 11,848,704			0.00	\$ - \$ -			0.76	
13 Cut & Cover Double Track Tunnel 14 Trench Long (2 tracks) (1000 + ft) Trench Long (4 tracks) (1000 + ft) 15 Trench Short (2 tracks) (<1000 ft) Trench Short (4 tracks) (<1000 ft) 16 Mechanical & Electrical for Tunnels 17 Retaining Walls 18 Containment Walls 19 Single Track Cut and Cover Subway	Mile Mile Mile Mile Mile Mile Mile Mile	\$ 131,246,080 \$ 57,524,224 \$ 86,286,336 \$ 78,843,904 \$ 118,265,856 \$ 11,848,704 \$ 8,613,888 \$ 5,907,456 \$ 131,246,080			0.00	\$ - \$ -			0.76 \$ \$ \$ \$	
13 Cut & Cover Double Track Tunnel 14 Trench Long (2 tracks) (1000 + ft) Trench Long (4 tracks) (1000 + ft) 15 Trench Short (2 tracks) (<1000 ft) Trench Short (4 tracks) (<1000 ft) 16 Mechanical & Electrical for Tunnels 17 Retaining Walls 18 Containment Walls 19 Single Track Cut and Cover Subway Four Track Drill & Blast	Mile Mile Mile Mile Mile Mile Mile Mile	\$ 131,246,080 \$ 57,524,224 \$ 86,286,336 \$ 78,843,904 \$ 118,265,856 \$ 11,848,704 \$ 8,613,888 \$ 5,907,456 \$ 131,246,080 \$ 293,775,360			0.00	\$ - \$ -			0.76 \$ \$ \$ \$ \$	
13 Cut & Cover Double Track Tunnel 14 Trench Long (2 tracks) (1000 + ft) Trench Long (4 tracks) (1000 + ft) Trench Short (2 tracks) (<1000 ft) Trench Short (4 tracks) (<1000 ft) Mechanical & Electrical for Tunnels 17 Retaining Walls 18 Containment Walls 19 Single Track Cut and Cover Subway Four Track Drill & Blast Four Track Mined (Soft Soil)	Mile Mile Mile Mile Mile Mile Mile Mile	\$ 131,246,080 \$ 57,524,224 \$ 86,286,336 \$ 78,843,904 \$ 118,265,856 \$ 11,848,704 \$ 8,613,888 \$ 5,907,456 \$ 131,246,080 \$ 293,775,360 \$ 158,400,000			0.00	\$ - \$ -			0.76 \$ \$ \$ \$ \$	
13 Cut & Cover Double Track Tunnel 14 Trench Long (2 tracks) (1000 + ft) Trench Long (4 tracks) (1000 + ft) 15 Trench Short (2 tracks) (<1000 ft) 16 Mechanical & Electrical for Tunnels 17 Retaining Walls 18 Containment Walls 19 Single Track Cut and Cover Subway Four Track Drill & Blast Four Track Mined (Soft Soil) Four Track TBM (<6 Miles)	Mile Mile Mile Mile Mile Mile Mile Mile	\$ 131,246,080 \$ 57,524,224 \$ 86,286,336 \$ 78,843,904 \$ 118,265,856 \$ 11,848,704 \$ 8,613,888 \$ 5,907,456 \$ 131,246,080 \$ 293,775,360 \$ 158,400,000 \$ 213,274,624			0.00	\$ - \$ -			0.76 \$ \$ \$ \$	
13 Cut & Cover Double Track Tunnel 14 Trench Long (2 tracks) (1000 + ft) Trench Long (4 tracks) (1000 + ft) 15 Trench Short (2 tracks) (<1000 ft) Trench Short (4 tracks) (<1000 ft) 16 Mechanical & Electrical for Tunnels 17 Retaining Walls 18 Containment Walls 19 Single Track Cut and Cover Subway Four Track Drill & Blast Four Track Mined (Soft Soil) Four Track TBM (<6 Miles) Four Track TBM w/3rd Tube (>6 Miles)	Mile Mile Mile Mile Mile Mile Mile Mile	\$ 131,246,080 \$ 57,524,224 \$ 86,286,336 \$ 78,843,904 \$ 118,265,856 \$ 11,848,704 \$ 8,613,888 \$ 5,907,456 \$ 131,246,080 \$ 293,775,360 \$ 158,400,000 \$ 213,274,624 \$ 353,441,792			0.00	\$ - S - S - S - S - S - S - S - S - S -			0.76 \$ \$ \$ \$	
13 Cut & Cover Double Track Tunnel 14 Trench Long (2 tracks) (1000 + ft) Trench Long (4 tracks) (1000 + ft) 15 Trench Short (2 tracks) (<1000 ft) 16 Mechanical & Electrical for Tunnels 17 Retaining Walls 18 Containment Walls 19 Single Track Cut and Cover Subway Four Track Drill & Blast Four Track Mined (Soft Soil) Four Track TBM (<6 Miles)	Mile Mile Mile Mile Mile Mile Mile Mile	\$ 131,246,080 \$ 57,524,224 \$ 86,286,336 \$ 78,843,904 \$ 118,265,856 \$ 11,848,704 \$ 8,613,888 \$ 5,907,456 \$ 131,246,080 \$ 293,775,360 \$ 158,400,000 \$ 213,274,624			0.00	\$ - S - S - S - S - S - S - S - S - S -			0.76 \$ \$ \$ \$ \$ \$ \$ \$	
Cut & Cover Double Track Tunnel Trench Long (2 tracks) (1000 + ft) Trench Short (2 tracks) (1000 + ft) Trench Short (4 tracks) (<1000 ft) Trench Short (4 tracks) (<1000 ft) Trench Short (4 tracks) (<1000 ft) Mechanical & Electrical for Tunnels Retaining Walls Containment Walls Single Track Cut and Cover Subway Four Track Drill & Blast Four Track Mined (Soft Soil) Four Track TBM (<6 Miles) Four Track TBM w/3rd Tube (<6 Miles) Four Track Cut & Cover Tunnel	Mile Mile Mile Mile Mile Mile Mile Mile	\$ 131,246,080 \$ 57,524,224 \$ 86,286,336 \$ 78,843,904 \$ 118,265,856 \$ 11,848,704 \$ 8,613,888 \$ 5,907,456 \$ 131,246,080 \$ 293,775,360 \$ 158,400,000 \$ 213,274,624 \$ 353,441,792			0.00	\$ - S - S - S - S - S - S - S - S - S -			0.76 \$ \$ \$ \$ \$ \$	
Cut & Cover Double Track Tunnel Trench Long (2 tracks) (1000 + ft) Trench Long (4 tracks) (1000 + ft) Trench Short (2 tracks) (<1000 ft) Trench Short (4 tracks) (<1000 ft) Mechanical & Electrical for Tunnels Retaining Walls Containment Walls Single Track Cut and Cover Subway Four Track Drill & Blast Four Track Mined (Soft Soil) Four Track TBM (<6 Miles) Four Track TBM v/3rd Tube (>6 Miles) Four Track Cut & Cover Tunnel Grade Separations	Mile Mile Mile Mile Mile Mile Mile Mile	\$ 131,246,080 \$ 57,524,224 \$ 86,286,336 \$ 78,843,904 \$ 118,265,856 \$ 11,848,704 \$ 8,613,888 \$ 5,907,456 \$ 131,246,080 \$ 293,775,360 \$ 158,400,000 \$ 213,274,624 \$ 353,441,792 \$ 262,492,160			0.00	\$ - S - S - S - S - S - S - S - S - S -			0.76 \$ \$ \$ \$ \$ \$	
3 Cut & Cover Double Track Tunnel 4 Trench Long (2 tracks) (1000 + ft) Trench Long (4 tracks) (1000 + ft) 5 Trench Short (2 tracks) (<1000 ft) Trench Short (4 tracks) (<1000 ft) 6 Mechanical & Electrical for Tunnels 7 Retaining Walls 8 Containment Walls 9 Single Track Cut and Cover Subway Four Track Drill & Blast Four Track Mined (Soft Soil) Four Track TBM (<6 Miles) Four Track TBM v/3rd Tube (>6 Miles) Four Track Cut & Cover Tunnel Grade Separations 1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	Mile Mile Mile Mile Mile Mile Mile Mile	\$ 131,246,080 \$ 57,524,224 \$ 86,286,336 \$ 78,843,904 \$ 118,265,856 \$ 11,848,704 \$ 8,613,888 \$ 5,907,456 \$ 131,246,080 \$ 293,775,360 \$ 158,400,000 \$ 213,274,624 \$ 353,441,792 \$ 262,492,160 \$ 13,284,352			0.00	\$ - S - S - S - S - S - S - S - S - S -			0.76 \$ \$ \$ \$ \$ \$ \$	
3 Cut & Cover Double Track Tunnel 4 Trench Long (2 tracks) (1000 + ft) Trench Long (4 tracks) (1000 + ft) 5 Trench Short (2 tracks) (<1000 ft) 6 Mechanical & Electrical for Tunnels 7 Retaining Walls 8 Containment Walls 9 Single Track Cut and Cover Subway Four Track Drill & Blast Four Track Drill & Blast Four Track Mined (Soft Soil) Four Track TBM (<6 Miles) Four Track TBM v/3rd Tube (>6 Miles) Four Track Cut & Cover Tunnel Grade Separations 1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	Mile Mile Mile Mile Mile Mile Mile Mile	\$ 131,246,080 \$ 57,524,224 \$ 86,286,336 \$ 78,843,904 \$ 118,265,956 \$ 11,848,704 \$ 8,613,888 \$ 5,907,456 \$ 131,246,080 \$ 293,775,360 \$ 158,400,000 \$ 213,274,624 \$ 353,441,792 \$ 262,492,160 \$ 13,284,352 \$ 19,926,528			0.00	\$ - S - S - S - S - S - S - S - S - S -			0.76 \$ \$ \$ \$ \$ \$ \$ \$	
3 Cut & Cover Double Track Tunnel 4 Trench Long (2 tracks) (1000 + ft) Trench Long (4 tracks) (1000 + ft) 5 Trench Short (2 tracks) (<1000 ft) Trench Short (4 tracks) (<1000 ft) 6 Mechanical & Electrical for Tunnels 7 Retaining Walls 8 Containment Walls 9 Single Track Cut and Cover Subway Four Track Drill & Blast Four Track Drill & Blast Four Track Mined (Soft Soil) Four Track TBM (<6 Miles) Four Track TBM W3rd Tube (>6 Miles) Four Track Cut & Cover Tunnel Grade Separations 1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) 2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	Mile Mile Mile Mile Mile Mile Mile Mile	\$ 131,246,080 \$ 57,524,224 \$ 86,286,336 \$ 78,843,904 \$ 118,265,856 \$ 131,848,704 \$ 8,613,888 \$ 5,907,456 \$ 131,246,080 \$ 293,775,360 \$ 158,400,000 \$ 213,274,624 \$ 353,441,792 \$ 262,492,160 \$ 13,284,352 \$ 19,926,528 \$ 2,759,680			0.00	\$ - S - S - S - S - S - S - S - S - S -			0.76 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	
3 Cut & Cover Double Track Tunnel 4 Trench Long (2 tracks) (1000 + ft) Trench Long (4 tracks) (1000 + ft) 5 Trench Short (2 tracks) (<1000 ft) 1 Trench Short (4 tracks) (<1000 ft) 6 Mechanical & Electrical for Tunnels 7 Retaining Walls 8 Containment Walls 9 Single Track Cut and Cover Subway Four Track Drill & Blast Four Track Drill & Blast Four Track Mined (Soft Soil) Four Track TBM (<6 Miles) Four Track TBM Vard Tube (<6 Miles) Four Track Cut & Cover Tunnel Grade Separations 1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban) Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) 3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	Mile Mile Mile Mile Mile Mile Mile Mile	\$ 131,246,080 \$ 57,524,224 \$ 86,286,336 \$ 78,843,904 \$ 118,265,856 \$ 11,848,704 \$ 8,613,888 \$ 5,907,456 \$ 131,246,080 \$ 293,775,360 \$ 158,400,000 \$ 213,274,624 \$ 353,441,792 \$ 262,492,160 \$ 13,284,352 \$ 19,926,528 \$ 2,759,680 \$ 2,029,568			0.00	\$ - S - S - S - S - S - S - S - S - S -			0.76 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	
3 Cut & Cover Double Track Tunnel 4 Trench Long (2 tracks) (1000 + ft) Trench Long (4 tracks) (1000 + ft) 5 Trench Short (2 tracks) (<1000 ft) Trench Short (4 tracks) (<1000 ft) 6 Mechanical & Electrical for Tunnels 7 Retaining Walls 8 Containment Walls 9 Single Track Cut and Cover Subway Four Track Drill & Blast Four Track Drill & Blast Four Track Mined (Soft Soil) Four Track TBM (<6 Miles) Four Track TBM v/3rd Tube (>6 Miles) Four Track Cut & Cover Tunnel Grade Separations 1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban) Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) 3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Urban) 4 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Urban) 5 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Urban) 6 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Urban) 7 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Urban) 7 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Urban) 7 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	Mile Mile Mile Mile Mile Mile Mile Mile	\$ 131,246,080 \$ 57,524,224 \$ 86,286,336 \$ 78,843,904 \$ 118,265,856 \$ 11,848,704 \$ 8,613,888 \$ 5,907,456 \$ 131,246,080 \$ 293,775,360 \$ 158,400,000 \$ 213,274,624 \$ 353,441,792 \$ 262,492,160 \$ 13,284,352 \$ 19,926,528 \$ 2,759,680 \$ 2,029,568 \$ 3,563,520			0.00	\$ - S - S - S - S - S - S - S - S - S -			0.76 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	
33 Cut & Cover Double Track Tunnel 44 Trench Long (2 tracks) (1000 + ft) Trench Long (4 tracks) (1000 + ft) 55 Trench Short (2 tracks) (4 track	Mile Mile Mile Mile Mile Mile Mile Mile	\$ 131,246,080 \$ 57,524,224 \$ 86,286,336 \$ 78,843,904 \$ 118,265,856 \$ 11,848,704 \$ 8,613,888 \$ 5,907,456 \$ 131,246,080 \$ 293,775,360 \$ 158,400,000 \$ 213,274,624 \$ 353,441,792 \$ 262,492,160 \$ 13,284,352 \$ 19,926,528 \$ 2,759,680 \$ 2,029,568 \$ 3,563,520 \$ 3,563,520 \$ 3,593,216			0.00	\$ - S - S - S - S - S - S - S - S - S -			0.76 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	
13 Cut & Cover Double Track Tunnel 14 Trench Long (2 tracks) (1000 + ft) Trench Long (4 tracks) (1000 + ft) 15 Trench Short (2 tracks) (<1000 ft) 16 Mechanical & Electrical for Tunnels 17 Retaining Walls 18 Containment Walls 19 Single Track Cut and Cover Subway Four Track Drill & Blast Four Track Mined (Soft Soil) Four Track TBM (<6 Miles) Four Track TBM v/3rd Tube (<6 Miles) Four Track Cut & Cover Tunnel Grade Separations 1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	Mile Mile Mile Mile Mile Mile Mile Mile	\$ 131,246,080 \$ 57,524,224 \$ 86,286,336 \$ 78,843,904 \$ 118,265,856 \$ 11,848,704 \$ 8,613,888 \$ 5,907,456 \$ 131,246,080 \$ 293,775,360 \$ 158,400,000 \$ 213,274,624 \$ 353,441,792 \$ 262,492,160 \$ 13,284,352 \$ 19,926,528 \$ 2,759,680 \$ 2,029,568 \$ 3,563,520			0.00	\$ - S - S - S - S - S - S - S - S - S -			0.76 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	8,976,29

COST ELEMENTS	UNIT	UNIT PRICE	CE At-Grade Tunnel (2 tracks - Mined)								
Subsection 1		Base: 2009	0		В		0		B 0.76 Miles		
		(3rd Quarter)	Start: 215 + 00	End: 255 + 00	0.76	Miles	Start: 215 + 00	End: 255 + 00	0.76	Miles	
Subsection Details					Quant.	Cost			Quant.	Cost	
Double Track At-Grade (Mile)			Start: 215 + 00	End: 255 + 00	0.76 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Double Track Elevated (Mile) Double Track Tunnel (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 215 + 00	End: 255 + 00	0.00 Miles 0.76 Miles		
Double Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00	Liiu. 255 + 00	0.00 Miles		
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Elevated (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Four Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Trench (Mile) 8 Minor Crossing Closures	ea	\$ 87,040	Start: 0 + 00		0.00 Miles	\$ -	Start: 0 + 00		0.00 Miles	\$	
William Grossing Glosures	cu	\$ 07,040				•				Ψ	
Building Items											
1 Intermediate Passenger Stations		\$ -				\$ -				\$	-
2 Terminal Passenger Stations	Each	\$ -				\$ -				\$	-
Caltrain Passenger Station - At-Grade Caltrain Passenger Station - On Structure	Each Each	\$15,000,000 \$15,000,000				\$ - \$ -				\$ \$	-
Caltrain Passenger Station - In Tunnel or Subway	Each	\$15,000,000				\$ -				\$	-
Caltrain Passenger Station - In Trench	Each	\$15,000,000				\$ -				\$	-
3 Maintenance Facility	Each	\$ 123,921,884				\$ -				\$	-
4 Parking - Structures	space	-				\$ - \$ -				\$ \$	-
5 Parking - At Grade	space	\$ -				φ -				٥	-
Rail & Utility Relocation											
1 Single Track Relocation (Temporary)	Mile	\$ 2,000,896				\$ -				\$	-
2 Single Track Relocation (Permanent)	Mile	\$ 2,000,896				-				\$	-
Single Track Removal Major Utility Relocations - Dense Urban	Mile Mile	\$ 130,048 \$ 1,548,288				\$ - \$ -				\$ \$	-
5 Major Utility Relocations - Urban	Mile	\$ 1,084,416				\$ -				\$	
6 Major Utility Relocations - Dense Suburban	Mile	\$ 775,168				\$ -				\$	_
7 Major Utility Relocations - Suburban	Mile	\$ 464,896				\$ -				\$	-
8 Major Utility Relocations - Undeveloped	Mile	\$ 30,720				\$ -				\$	-
ROW (NOT INCLUDED)											
ROW (NOT INCLUDED) ROW required for each segment											
1 Dense Urban	Acre	\$ 2,786,321				\$ -				\$	-
2 Urban	Acre	\$ 1,371,510				\$ -				\$	-
3 Dense Suburban	Acre	\$ 908,134				-				\$	-
4 Suburban 5 Undeveloped	Acre Acre	\$ 208,418 \$ 3,642				-				\$	-
ROW required for Temp. Construction Easement	Acre	\$ 3,042				-				Þ	
1 Dense Urban	Acre					\$ -				\$	-
2 Urban	Acre					\$ -				\$	-
3 Dense Suburban	Acre					\$ -				\$	-
4 Suburban 5 Undeveloped	Acre Acre					\$ -				\$	
Right-of-Way Required for Stations, Maintenance & Parking Facilities	Acie					,				Ψ	
6 Dense Urban	Acre	\$ 2,786,321				\$ -				\$	-
7 Urban	Acre	\$ 1,371,510				-				\$	-
8 Dense Suburban 9 Suburban	Acre	\$ 908,134				-				\$	-
10 Undeveloped	Acre Acre	\$ 208,418 \$ 3,642				\$ - \$ -				\$ \$	
Environmental Mitigation = 3% Line Costs	Acic	ψ 3,04Z				\$ 209,305					8,498
										.,	
System Elements									_		0.55-
1 Signaling (ATC) 2 Communications (w/ Fiber Optic Backbone)	Mile Mile	\$ 2,070,000 \$ 540,000			0.76 0.76				0.76 0.76		8,182 9,091
3 Wayside Protection System	Mile	\$ 108,000			0.76				0.76		1,818
		,,,,,,,			5.76	31,010			3.70	, 31	,5.0
Electrification Items		1.].	
1 Traction Power supply	Mile	\$ 1,170,000			0.76				0.76		6,364
2 Traction Power Distribution Subtotal	Mile	\$ 1,485,000			0.76	\$ 1,125,000 \$ 11,256,580			0.76	\$ 1,125 \$ 143,412	5,000
Program Implementation Costs (per screening)						\$ 11,256,580				\$ 143,412	
Program Implementation Costs						,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				22,370	
											0.05-
Contingencies (per screening) (25%)						\$ 2,814,145				\$ 35,853	3,055
Subtotal	<u> </u>	1	l			\$ 16,941,153	<u> </u>	I	<u>I</u>	\$ 215,835	5 304
Subtotal (Rounded)						\$ 17.000.000	<u> </u>			\$ 216,000.	

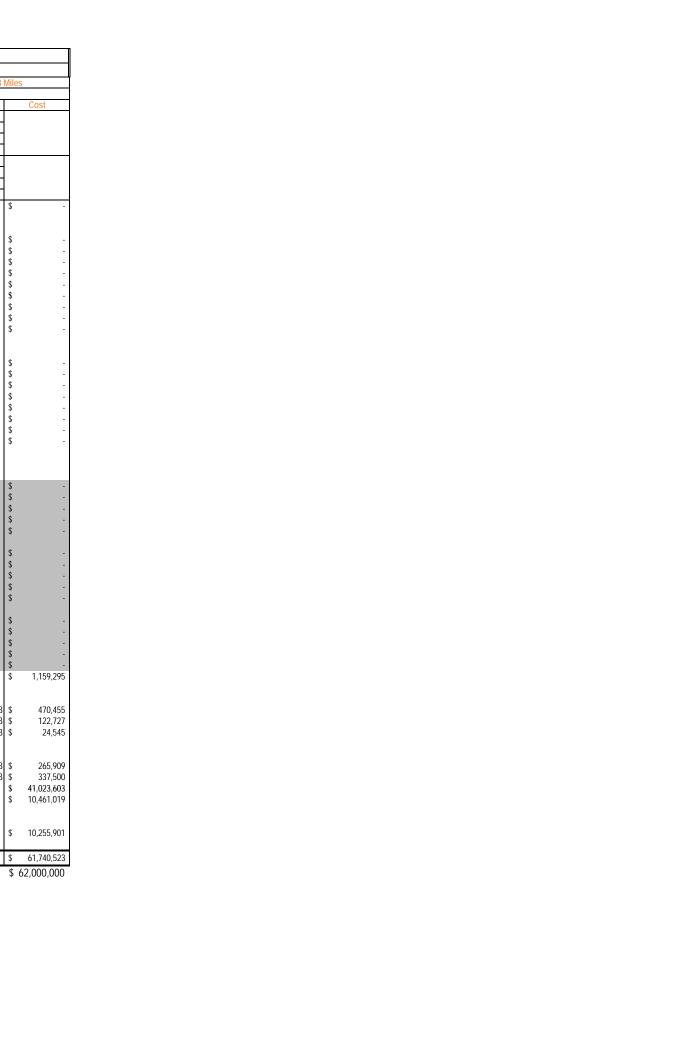
Subtotal (Rounded) \$ 17,000,000 \$ 216,000,000

Miles	
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\$	143,412,222 36,570,117
\$	35,853,055
\$ 2	215,835,394 16,000,000

COST ELEMENTS	UNIT	UNIT PRICE		At-G	Grade		Tunnel (2 tracks - Mined)			
ubsection 1		Base: 2009	Start: 255 + 00	End: 267 + 00	0.23 l	Miles	Start: 255 + 00	End: 267 + 00	0.23 Mil	les
		(3rd Quarter)	Start: 200 1 00	E11d. 207 + 00	0.201	Willes	Start: 200 1 00	End. 207 1 00	0.20 1/11	103
ubsection Details			Ct+ 2FF 00	End: 267 + 00	Quant.	Cost	Ctt 0 00	F1.0 00	Quant.	Cost
ouble Track At-Grade (Mile) ouble Track Elevated (Mile)			Start: 255 + 00 Start: 0 + 00	End: 267 + 00	0.23 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	
ouble Track Elevated (Mile)			Start: 0 + 00	+	0.00 Miles		Start: 255 + 00	End: 267 + 00	0.23 Miles	
ouble Track Tranker (Wille)			Start: 0 + 00		0.00 Miles		Start: 0 + 00	E11d. 207 1 00	0.00 Miles	
our Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
our Track Elevated (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
our Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
our Track Trench (Mile)		r	Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Section - Total	N 4:1-	¢ 2.100.224			0.22	¢ 477.224			0.00 ¢	
1 Double Track Section - At Grade 2 Double Track Section - On Structure	Mile Mile	\$ 2,100,224 \$ 4,700,160			0.23 0.00				0.00 \$ 0.00 \$	
3 Double Track Section - In Tunnel or Subway	Mile	\$ 4,700,160			0.00				0.00 \$	
4 Double Track Section - In Trench	Mile	\$ 4,700,160			0.00				0.00 \$	
Four Track Section - Total										
Four-track Section - At Grade	Mile	\$ 4,200,448			0.00				0.00 \$	
Four-Track Section - On Structure	Mile	\$ 9,400,320				\$ -			0.00 \$	
Four-Track Section - In Tunnel or Subway	Mile	\$ 9,400,320			-	\$ -			0.00 \$	
Four-Track Section - In Trench	Mile	\$ 9,400,320			0.00	\$ -			0.00 \$	
Single Track - Total										
5 Single Track Section - At Grade	Mile	\$ 1,549,312]	n	\$ -			0.00 \$	
6 Single Track Section - At Grade	Mile	\$ 2,350,080				\$ -			0.00 \$	
7 Single Track Section - In Tunnel or Subway	Mile	\$ 2,350,080				\$ -			0.00 \$	
8 Single Track Section - In Trench	Mile	\$ 2,350,080				\$ -			0.00 \$	
		1.				1.				
9 Freight Double Track - At Grade	Mile	\$ 2,839,552]		\$ -			0.00 \$	
0 Freight Single Track - At Grade	Mile	\$ 1,549,312			0	\$ -			0.00 \$	
Earthwork Items										
1 Site Preparation - Undeveloped	Acre	\$ 9,216			3.03	\$ 27,927			3.03 \$	27,92
2 Total Cut	CY	\$ 6			0.00				84333.00 \$	
3 Total Fill	CY	\$ 6			33733.00				33733.00 \$	
4 Borrow	CY	\$ 13			33733.00				0.00 \$	
5 Spoil	CY	\$ 13			0.00				50600.00 \$	
6 Landscape erosion Control	Acre	\$ 6,144			0.09	\$ 553			1.05 \$	6,45
7 Security Fencing (Both sides of ROW)	Mile	\$ 144,384			0.23				0.00 \$	
8 Special Drainage Facilities	5% Ea	rthwork				\$ 34,891			\$	71,35
Structures, Tunnels, Walls										
1 Standard Structure (2 tracks)	Mile	\$ 34,972,672			0.00	\$ -			0.00 \$	
Standard Structure (4 tracks)	Mile	\$ 52,459,008			0.00				0.00 \$	
2 High Structure	Mile	\$ 40,424,448				\$ -			\$	
3 Long Span Structure	Mile	\$ 61,919,232				\$ -			\$	
4 Waterway Crossing - Primary	Mile	\$ 85,342,208				\$ -			\$	
5 Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$ 92,049,408			0.00	\$ -			\$	
6 Twin Single Track Drill&Blast (<6 Miles)	Mile	\$ 142,731,264				\$ -			\$	
7 Twin Single Track TBM (<6 Miles)	Mile	\$ 106,637,312				\$ -			\$	
8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$ 176,720,896			0.00	\$ -			\$	00.000.54
9 Double Track Drill & Blast	Mile Mile	\$ 146,887,680			0.00	\$ -			0.23 \$	33,383,56
0 Double Track Mined (Soft Soil) Double Track TBM (<6 Miles)	Mile	\$ 79,200,000 \$ 106,637,312				\$ -			•	
Double Track TBM (<6 Miles) Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 106,637,312				\$ -				
1 Seismic Chamber (Drill & Blast/Mined)	ea	\$ 176,720,696				\$ -			¢	
2 Crossovers	ea	\$ 442,368				\$ -			\$	
3 Cut & Cover Double Track Tunnel	Mile	\$ 131,246,080			0.00	\$ -			0.00 \$	
4 Trench Long (2 tracks) (1000 + ft)	Mile	\$ 57,524,224]	0.00				\$	
Trench Long (4 tracks) (1000 + ft)	Mile	\$ 86,286,336]						
5 Trench Short (2 tracks) (<1000 ft)	Mile	\$ 78,843,904]		\$ -			\$	
Trench Short (4 tracks) (<1000 ft)	Mile	\$ 118,265,856]		¢.			0.00	0.700.00
6 Mechanical & Electrical for Tunnels	Mile	\$ 11,848,704]	0.00	\$ -			0.23 \$	2,692,8
7 Retaining Walls 8 Containment Walls	Mile Mile	\$ 8,613,888]	0.00	\$ -			\$	
9 Single Track Cut and Cover Subway	Mile	\$ 5,907,456 \$ 131,246,080				\$			\$	
Four Track Drill & Blast	Mile	\$ 293,775,360				\$ -			¢	
Four Track Mined (Soft Soil)	Mile	\$ 158,400,000				\$ -				
Four Track TBM (<6 Miles)	Mile	\$ 213,274,624]		\$ -				
	Mile	\$ 353,441,792]		\$ -				
Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 262,492,160]	0.00	\$ -			\$	
Four Track Cut & Cover Tunnel	1									
Four Track Cut & Cover Tunnel			ĺ]						
Four Track Cut & Cover Tunnel Grade Separations							Ī	ĺ	\$	
Four Track Cut & Cover Tunnel Grade Separations Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$ 13,284,352				I				
Four Track Cut & Cover Tunnel Grade Separations Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$ 19,926,528				\$ -			\$	
Four Track Cut & Cover Tunnel Grade Separations 1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) 2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea ea	\$ 19,926,528 \$ 2,759,680				\$ - \$ -			\$	
Four Track Cut & Cover Tunnel Grade Separations 1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) 2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) 3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea ea ea	\$ 19,926,528 \$ 2,759,680 \$ 2,029,568				\$ - \$ -			\$ \$ \$	
Four Track Cut & Cover Tunnel Grade Separations 1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) 2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) 3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) 4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea ea ea	\$ 19,926,528 \$ 2,759,680 \$ 2,029,568 \$ 3,563,520			0	\$ -			\$ \$ \$	
Four Track Cut & Cover Tunnel Grade Separations 1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) 2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) 3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) 4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban) 5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea ea ea ea	\$ 19,926,528 \$ 2,759,680 \$ 2,029,568 \$ 3,563,520 \$ 3,593,216				\$ - \$ -			\$ \$ \$ \$	
Four Track Cut & Cover Tunnel Grade Separations 1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) 2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) 3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) 4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea ea ea	\$ 19,926,528 \$ 2,759,680 \$ 2,029,568 \$ 3,563,520			0	\$ -			\$ \$ \$ \$ \$	

COST ELEMENTS	UNIT	UNIT PRICE			Grade		Tunnel (2 tracks - Mined)			
Subsection 1		Base: 2009	Start: 255 + 00	End: 267 + 00	C 0.23	Milos	Start, SEE . OO	End: 267 + 00		Milos
		(3rd Quarter)	Start: 255 + 00	E110: 267 + 00	U.23	viiles	Start: 255 + 00	E110: 267 + 00	0.23	Miles
Subsection Details		•			Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile) Double Track Elevated (Mile)			Start: 255 + 00	End: 267 + 00	0.23 Miles 0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles		Start: 0 + 00 Start: 255 + 00	End: 267 + 00	0.00 Miles 0.23 Miles	
Double Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00	L11d. 207 + 00	0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Trench (Mile) 8 Minor Crossing Closures	ea	\$ 87,040	Start: 0 + 00		0.00 Miles	\$ -	Start: 0 + 00		0.00 Miles	\$
olivinor crossing closures	ea	\$ 67,040				.				
Building Items										
1 Intermediate Passenger Stations	Each	\$ -				\$ -				\$ -
2 Terminal Passenger Stations	Each	\$ -				\$ -				\$ -
Caltrain Passenger Station - At-Grade	Each	\$15,000,000				-				\$ -
Caltrain Passenger Station - On Structure Caltrain Passenger Station - In Tunnel or Subway	Each Each	\$15,000,000 \$15,000,000				\$ - \$ -				\$ - \$ -
Califain Passenger Station - In Trench	Each	\$15,000,000				\$ -				\$ -
3 Maintenance Facility	Each	\$ 123,921,884				\$ -				\$ -
4 Parking - Structures	space	\$ -				\$ -				\$ -
5 Parking - At Grade	space	\$ -				\$ -				\$ -
Rail & Utility Relocation	Milo	¢ 2,000,007				¢				¢
1 Single Track Relocation (Temporary) 2 Single Track Relocation (Permanent)	Mile Mile	\$ 2,000,896 \$ 2,000,896				\$ - \$ -				\$ -
3 Single Track Removal	Mile	\$ 130,048				\$ -				\$ -
4 Major Utility Relocations - Dense Urban	Mile	\$ 1,548,288				\$ -				\$ -
5 Major Utility Relocations - Urban	Mile	\$ 1,084,416				\$ -				\$ -
6 Major Utility Relocations - Dense Suburban	Mile	\$ 775,168				-				\$ -
7 Major Utility Relocations - Suburban 8 Major Utility Relocations - Undeveloped	Mile Mile	\$ 464,896 \$ 30,720				\$ - \$ -				\$ - \$ -
oliviajor Otility Relocations - Orluevelopeu	wille	\$ 30,720				\$ -				5 -
ROW (NOT INCLUDED)										
ROW required for each segment										
1 Dense Urban	Acre	\$ 2,786,321				\$ -				\$ -
2 Urban	Acre	\$ 1,371,510				-				-
3 Dense Suburban 4 Suburban	Acre Acre	\$ 908,134 \$ 208,418				\$ -				
5 Undeveloped	Acre	\$ 200,410				\$ -				\$ -
ROW required for Temp. Construction Easement	Acic	ψ 3,04Z				*				Ψ
1 Dense Urban	Acre					\$ -				\$ -
2 Urban	Acre					\$ -				\$ -
3 Dense Suburban	Acre					-				-
4 Suburban 5 Undeveloped	Acre Acre					\$ -				
Right-of-Way Required for Stations, Maintenance & Parking Facilities	Acre					\$ -				-
6 Dense Urban	Acre	\$ 2,786,321				\$ -				\$ -
7 Urban	Acre	\$ 1,371,510				\$ -				\$ -
8 Dense Suburban	Acre	\$ 908,134				\$ -				\$ -
9 Suburban	Acre	\$ 208,418				\$ -				\$ -
10 Undeveloped Environmental Mitigation = 3% Line Costs	Acre	\$ 3,642				\$ - \$ 36,301				\$ - \$ 1,159,295
Environmental ivilligation = 370 Line Costs						ψ 30,301				φ 1,109,295
System Elements		1								
1 Signaling (ATC)	Mile	\$ 2,070,000			0.23				0.23	
2 Communications (w/ Fiber Optic Backbone)	Mile	\$ 540,000			0.23				0.23	
3 Wayside Protection System	Mile	\$ 108,000			0.23	\$ 24,545			0.23	\$ 24,545
Electrification Items										
1 Traction Power supply	Mile	\$ 1,170,000			0.23	\$ 265,909			0.23	\$ 265,909
2 Traction Power Distribution	Mile	\$ 1,485,000			0.23				0.23	
Subtotal						\$ 2,467,481				\$ 41,023,603
Program Implementation Costs (per screening)						\$ 629,208				\$ 10,461,019
Program Implementation Costs										
Contingencies (per screening) (25%)						\$ 616,870				\$ 10,255,901
						. 010,010				
Subtotal		•				\$ 3,713,559				\$ 61,740,523
Subtotal (Rounded)						\$ 4.000.000	I.			\$ 62,000,000

Subtotal (Rounded) \$ 4,000,000 \$ 62,000,000



COST ELEMENTS Subsection 1	UNIT			At-Grade	(2 Iracks)			At-Grad	le (4 Tracks)		<u> </u>	Tunnel (2 tr	racks - Mined)	
Subsection 1		Base: 2009 (3rd Quarter)	I	[<u>-</u> D_	_		_	D	_	L	_	D	_
	,	isi u Quarter)	Start: 267 + 00	End: 315 + 00	0.91 M	liles	Start: 267 + 00	End: 315 + 00		Miles	Start: 267 + 00	End: 315 + 00	0.911	Miles
Subsection Details		1	-	-	Quant.	Cost	+	-	Quant.	Cost	-	-	Quant.	Cost
Double Track At-Grade (Mile)			Start: 267 + 00	End: 315 + 00	0.91 Miles	5531	Start: 0 + 00	End: 0 + 00	0.00 Miles	2001	Start: 0 + 00		0.00 Miles	5031
Double Track Elevated (Mile)		1	Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Tunnel (Mile)		Ĺ	Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 267 + 00	End: 315 + 00	0.91 Miles	
Double Track Trench (Mile) Four Track Construction/Reconstruction At-Grade (Mile)		+	Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile) Four Track Elevated (Mile)		1	Start: 0 + 00 Start: 0 + 00	∟11u. U + UU	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 267 + 00	End: 0 + 00 End: 315 + 00	0.00 Miles 0.91 Miles		Start: 0 + 00 Start: 0 + 00	∟nu. v + 00	0.00 Miles 0.00 Miles	
Four Track Tunnel (Mile)		1	Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Trench (Mile)		1	Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Section - Total	B 4**	\$ 2400.00	l	[1 000 -]	[- <u>-</u>		[
1 Double Track Section - At Grade 2 Double Track Section - On Structure	Mile Mile	\$ 2,100,224 \$ 4,700,160	l i	[1	0.91 S 0.00 S		']	1	0.00 \$			1	0.00	
3 Double Track Section - On Structure 3 Double Track Section - In Tunnel or Subway		\$ 4,700,160 \$ 4,700,160	1	[1	0.00			1	0.00			1	0.00	
4 Double Track Section - In Trench		\$ 4,700,160	1	1	0.00				0.00				0.00	
			1	1	1									
Four Track Section - Total		4 4 000	l i	[1	· [t		1	<u> </u>	t		1		ŧ
Four-track Section - At Grade Four-Track Section - On Structure		\$ 4,200,448 \$ 9,400,320	1	[1	0.00		-		0.00 S 0.91 S				0.00	
Four-Track Section - On Structure Four-Track Section - In Tunnel or Subway		\$ 9,400,320 \$ 9,400,320	1 1	[1	0 ;	\$			0.91 5				0	\$
Four-Track Section - In Tunnel or Subway Four-Track Section - In Trench		\$ 9,400,320 \$ 9,400,320	1	[1	0 5	\$			0 5				0	\$
		, .55,520	l i	[1	1			1	į	-		1	١	
Single Track - Total			l i	[1				1	į l			1		
5 Single Track Section - At Grade		\$ 1,549,312	1	[1	0 5	\$.	· [1	0 5	-		1	0	\$
6 Single Track Section - On structure	Mile	\$ 2,350,080	1 1	[1	0 3	\$ ·	1		0 3	> -			0	\$
7 Single Track Section - In Tunnel or Subway 8 Single Track Section - In Trench	Mile Mile	\$ 2,350,080 \$ 2,350,080	1	[1	0	\$			0 5	- \$			0 :	\$
	iviile	, ∠,აט∪,∪୪ U	1	1	1 0	•			0].				U	
9 Freight Double Track - At Grade	Mile	\$ 2,839,552	1	[1	0 5	\$ -			0 5	\$ -			0	\$ -
10 Freight Single Track - At Grade		\$ 1,549,312	1	[1	ı ől s	\$ -	-	1	0 5			1	l ő	\$ -
		1	1	[1	-				1				-1	
Earthwork Items			1	[1		· ·		1	į l	ķ :		1		t
1 Site Preparation - Undeveloped 2 Total Cut	Acre	\$ 9,216 \$ 6	l i	[1	12.12		`	1	12.12 \$ 0.00 \$			1	0.00 916667.00	
2 Total Cut 3 Total Fill	CY CY	\$ 6	1 1	[1	0.00 \$				0.00 \$				916667.00 366667.00	
3 Total Fill 4 Borrow	CY	\$ 6	l i	[1		\$ - \$ -		1	0.00 \$			1	366667.00 0.00	\$ -
4 Borrow 5 Spoil	CY	\$ 13		[1	0.00	\$ -			0.00	\$ -			550000.00	\$ 6,918,912
6 Landscape erosion Control	Acre	\$ 6,144	1	[1	0.85	\$ 5,222	, [1	0.85	\$ 5,222		1	0.00	\$ -
7 Security Fencing (Both sides of ROW)	Mile	\$ 144,384	1	[1	0.00	\$ -	=	1	0.00	\$ -		1	0.85	\$ 122,726
8 Special Drainage Facilities	5% Eart		1	[1		\$ 5,847	Ί] }	\$ 5,847]:	\$ 763,077
Structures Tunnels Walls		1	l i	[1				1	į l			1		
Structures, Tunnels, Walls 1 Standard Structure (2 tracks)	Mile	\$ 34.072./77	1 1	[1	000	\$			į l	\$			0.00	\$
1 Standard Structure (2 tracks) Standard Structure (4 tracks)	Mile Mile	\$ 34,972,672 \$ 52,459,008	1	[1	0.00 \$			1	0.91	\$ 47,690,007	1	1	0.00	
2 High Structure	Mile	\$ 52,459,008	1 1	[1	0.00	\$		1	0.91	\$		1	0.00	\$ -
3 Long Span Structure	Mile	\$ 61,919,232	1 1	[1		\$ -			[]	\$ -			l :	\$ -
4 Waterway Crossing - Primary	Mile	\$ 85,342,208	1	[1		\$ -		1	[]	\$ -		1	ļ .	\$ -
5 Waterway Crossing - Secondary (Irrigation Canal)		\$ 92,049,408	1	[1		\$.	· [1	[]	-		1	ļ .	\$ -
6 Twin Single Track Drill&Blast (<6 Miles) 7 Twin Single Track TRM (<6 Miles)		\$ 142,731,264 \$ 106,637,312	l i	[1	ı [S	.	· [1	į li	φ - t		1	-	• - \$
7 Twin Single Track TBM (<6 Miles) 8 Twin Single Track TBM w/3rd Tube (<6 Miles)		\$ 106,637,312 \$ 176,720,896	1 1	[1	ı [:	\$			į E	- \$			1.	\$
9 Double Track Drill & Blast		\$ 176,720,896 \$ 146,887,680	1	[1	0.00	\$		1	0.00	· \$		1	0.91	\$ 133,534,255
10 Double Track Mined (Soft Soil)	Mile	\$ 79,200,000	1	[1	0.00	\$ -		1	0.00	\$ -		1	0.00	\$ -
Double Track TBM (<6 Miles)	Mile	\$ 106,637,312	1 1	[1	<u> </u>				Ţ				0.00	
Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 176,720,896	1	[1		•		1	į l			1	1	*
11 Seismic Chamber (Drill & Blast/Mined)		\$ 126,205,952 \$ 442,368	1	[1			• [1	[3	> -		1	ļ .	\$ -
12 Crossovers 13 Cut & Cover Double Track Tunnel		\$ 442,368 \$ 131,246,080	1	[1	0.00	*	-		1	υ - \$			1	• - \$
13 Cut & Cover Double Track Tunnel 14 Trench Long (2 tracks) (1000 + ft)		\$ 131,246,080 \$ 57,524,224	1 1	[1	0.00 \$				0.00 \$				1.	\$
Trench Long (2 tracks) (1000 + ft) Trench Long (4 tracks) (1000 + ft)	Mile	\$ 57,524,224 \$ 86,286,336	1	[1	0.00	,		1	V.00	-		1		-
15 Trench Short (2 tracks) (<1000 ft)	Mile	\$ 78,843,904	1 1	[1		\$ -		1		\$ -		1	ļ .	\$ -
Trench Short (4 tracks) (<1000 ft)	Mile	\$ 118,265,856	1 1	[1	ļ .			1	Ţ			1		
16 Mechanical & Electrical for Tunnels	Mile	\$ 11,848,704	1 1	[1		\$ -			<u> </u>	\$ -			0.91	\$ 10,771,549
Retaining Walls	Mile	\$ 8,613,888	1	[1	0.00	\$.	· [1	0.00	-		1	ļ .	\$ -
18 Containment Walls		\$ 5,907,456 \$ 131,246,080	1	[1		\$ ·	- [1	į [;	- t		1		• - \$
19 Single Track Cut and Cover Subway Four Track Drill & Blast		\$ 131,246,080 \$ 293,775,360	l i	[1	ı E	\$		1	į E	-		1	ļ .	\$
Four Track Drill & Blast Four Track Mined (Soft Soil)		\$ 293,775,360 \$ 158,400,000	1 1	[1		\$			[\$			ı .	\$
Four Track TBM (<6 Miles)	Mile	\$ 213,274,624	1	[1	ļ .			1	Ţ	-		1	ļ .	\$ -
Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 353,441,792	1	[1				1	į l			1		\$ -
Four Track Cut & Cover Tunnel	Mile	\$ 262,492,160	1	[1	0.00	\$ -	• [0.00	\$ -			0.00	-
Crado Sonarations		1	1	[1				1	į l			1		
Grade Separations 1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	00	\$ 12 204 250	1	[1	I .	\$		1	į l.	\$		1		\$
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)		\$ 13,284,352 \$ 19,926,528	1	[1	[]	\$.		1	į į	- \$		1	ļ .	\$
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) 2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)		\$ 19,926,528 \$ 2,759,680	l i	[1	ı la	\$		1	į la	 \$		1	ļ .	\$
3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$ 2,029,568		[1		\$ -				\$ -			Į .	\$ -
4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 3,563,520		[1	0		-	1	0 5	\$ -		1		\$ -
5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$ 3,593,216		[1		\$ -	• [1	Ţ	\$ -		1	ļ :	\$ -
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 2,850,816		1	9	*	· [1	1 3	S -	ĺ	1 1	· [:	s -
6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$ 3,171,328	•	1		\$ -			1	¢.		1	1	¢.

COST ELEMENTS	U	INIT UNIT PRICE		At-Grade	(2 Tracks)			At-Grad	e (4 Tracks)			Tunnel (2 tra	acks - Mined)	
Subsection 1	-	Base: 2009			D				D				D	
		(3rd Quarter)	Start: 267 + 00			Miles	Start: 267 + 00	End: 315 + 00	0.91 M	liles	Start: 267 + 00	End: 315 + 00		Miles
Subsection Details Double Track At-Grade (Mile)			Start: 267 + 00	End: 315 + 00	Quant. 0.91 Miles	Cost	Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost	Start: 0 + 00		Quant. 0.00 Miles	Cost
Double Track Elevated (Mile)			Start: 0 + 00	Elia. 313 + 00	0.00 Miles		Start: 0 + 00	Liid. 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 267 + 00	End: 315 + 00	0.91 Miles	
Double Track Trench (Mile)			Start: 0 + 00	F 1 0 00	0.00 Miles		Start: 0 + 00	F 1 0 00	0.00 Miles		Start: 0 + 00	E 10 00	0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile) Four Track Elevated (Mile)			Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 267 + 00	End: 0 + 00 End: 315 + 00	0.00 Miles 0.91 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	
Four Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00	E11d. 515 1 00	0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
7 Street Bridging HSR Trench	ea					\$ -			\$	-			0	\$ - \$ -
8 Minor Crossing Closures	ea	a \$ 87,040	'			-			\$	-			U	\$ -
Building Items														
1 Intermediate Passenger Stations		ach \$ -	-			\$ -			\$	-				\$ -
2 Terminal Passenger Stations		ach \$				\$ -			\$	-				\$ -
Caltrain Passenger Station - At-Grade Caltrain Passenger Station - On Structure		fach \$15,000,000 fach \$15,000,000				\$ -			\$	-				\$ -
Caltrain Passenger Station - In Tunnel or Subway		ach \$15,000,000				\$ -			Š	-				\$ -
Caltrain Passenger Station - In Trench	E	ach \$15,000,000)			\$ -			\$	-				\$ -
3 Maintenance Facility		ach \$ 123,921,884	+			-			\$	-				\$ -
4 Parking - Structures 5 Parking - At Grade		pace \$ -	1			\$ - ¢			\$	-				\$ -
JI aiking - At Glauc	2	Jace p				Ψ -				-				φ -
Rail & Utility Relocation														
1 Single Track Relocation (Temporary)		ile \$ 2,000,896				\$ -			\$	-				\$ -
2 Single Track Relocation (Permanent)		ile \$ 2,000,896				\$ -			\$	-				\$ -
3 Single Track Removal 4 Major Utility Relocations - Dense Urban		ile \$ 130,048 ile \$ 1,548,288				\$ -			\$	-				\$ -
5 Major Utility Relocations - Dense orban		ile \$ 1,084,416				\$ -			Š	-				\$ -
6 Major Utility Relocations - Dense Suburban		ile \$ 775,168				\$ -			\$	-				\$ -
7 Major Utility Relocations - Suburban		ile \$ 464,896				\$ -			\$	-				\$ -
8 Major Utility Relocations - Undeveloped	M	ile \$ 30,720)			\$ -			\$	-				\$ -
ROW (NOT INCLUDED)														
ROW required for each segment														
1 Dense Urban		cre \$ 2,786,321				\$ -			\$	-				\$ -
2 Urban		cre \$ 1,371,510				-			\$	-				-
3 Dense Suburban 4 Suburban		cre \$ 908,134 cre \$ 208,418				-			\$	-				\$ -
5 Undeveloped		cre \$ 200,416				\$ -			\$					\$ -
ROW required for Temp. Construction Easement		cre				Ť			ľ					\$ -
1 Dense Urban		cre				\$ -			\$	-				\$ -
2 Urban		cre cre				-			\$	-				-
3 Dense Suburban 4 Suburban		cre				\$ -			\$	-				\$ -
5 Undeveloped		cre				\$ -			\$					\$ -
Right-of-Way Required for Stations, Maintenance & Parking Facilities														
6 Dense Urban		cre \$ 2,786,321				-			\$	-				-
7 Urban 8 Dense Suburban		cre \$ 1,371,510 cre \$ 908,134				\$ - \$ -			\$					\$ -
9 Suburban		cre \$ 208,418				\$ -			s s	-				\$ -
10 Undeveloped		cre \$ 3,642				\$ -			\$	-				\$ -
Environmental Mitigation = 3% Line Costs						\$ 60,962			\$	1,690,756				\$ 4,938,099
System Elements														
1 Signaling (ATC)	М	ile \$ 2,070,000	, [0.91	\$ 1,881,818			0.91 \$	1,881,818			0.91	\$ 1,881,818
2 Communications (w/ Fiber Optic Backbone)		ile \$ 540,000			0.91				0.91 \$				0.91	
3 Wayside Protection System	M	ile \$ 108,000)		0.91	\$ 98,182			0.91 \$	98,182			0.91	\$ 98,182
Electrification Items														
1 Traction Power supply	M	ile \$ 1,170,000	, [0.91	\$ 1,063,636			0.91 \$	1,063,636			0.91	\$ 1,063,636
2 Traction Power Distribution		ile \$ 1,485,000			0.91				0.91 \$				0.91	
	Subtotal					\$ 6,977,580			\$	62,933,832				\$ 174,425,945
Program Implementation Costs (per screening)						\$ 1,779,283			\$	16,048,127				\$ 44,478,616
Program Implementation Costs														
Contingencies (per screening) (25%)						\$ 1,744,395	1		\$	15,733,458				\$ 43,606,486
J-1-1-1-4-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-						.,,,576		<u> </u>		. 57. 557.700				
Subtotal						\$ 10,501,258			\$	94,715,417		•		\$ 262,511,047
Subtotal (Rounded)						\$ 11,000,000	•		\$					\$ 263,000,000

Subtotal (Rounded) \$ 11,000,000 \$ 95,000,000 \$ 263,000,000

COST ELEMENTS	UNIT	UNIT PRICE		At-Grade	(2 Tracks)			At-Grad	le (4 Tracks)			Tunnel (2	tracks - Mined)	
Subsection 1	·	Base: 2009 (3rd Quarter)			_				Г					
		Qualter)	Start: 315 + 00	End: 350 + 00		es	Start: 315 + 00	End: 350 + 00	0.66 N	Miles	Start: 315 + 00	Start: 350 + 00	0.66 N	liles
Subsection Potable					Quant.	Cost			Quant.	Cost			Quant	Cont
Subsection Details Double Track At-Grade (Mile)			Start: 315 + 00	End: 350 + 00	0.66 Miles	COSI	Start: 315 + 00	End: 350 + 00	0.66 Miles	COSI	Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost
Double Track Elevated (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Tunnel (Mile) Double Track Trench (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 315 + 00 Start: 0 + 00	End: 350 + 00	0.66 Miles 0.00 Miles		Start: 315 + 00 Start: 0 + 00	End: 350 + 00	0.66 Miles 0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	F 1 0 00	0.00 Miles	
Four Track Tunnel (Mile) Four Track Trench (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00 End: 0 + 00	0.00 Miles 0.00 Miles	
Double Track Section - Total														
1 Double Track Section - At Grade 2 Double Track Section - On Structure	Mile Mile	\$ 2,100,224 \$ 4,700,160			0.66 \$ 0.00 \$	1,392,194			0.66 \$ 0.00 \$				0.00 \$ 0.00 \$	-
3 Double Track Section - In Tunnel or Subway	Mile	\$ 4,700,160			0.00 \$	-			0.66 \$				0.66 \$	3,115,636
4 Double Track Section - In Trench	Mile	\$ 4,700,160			0.00 \$	-			0.00 \$	-			0.00 \$	-
Four Track Section - Total														
Four-track Section - At Grade	Mile	\$ 4,200,448			0.00 \$	-			0.00 \$				0.00 \$	-
Four-Track Section - On Structure Four-Track Section - In Tunnel or Subway	Mile Mile	\$ 9,400,320 \$ 9,400,320			0 \$	-			0 \$				0 \$	-
Four-Track Section - In Trench	Mile	\$ 9,400,320			0 \$	-			0 \$	-			0 \$	-
Circle Teach, Telel									[
Single Track - Total 5 Single Track Section - At Grade	Mile	\$ 1,549,312			0 \$	-			0 \$	_			0 \$	-
6 Single Track Section - On structure	Mile	\$ 2,350,080			0 \$	-			0 \$	-			0 \$	-
7 Single Track Section - In Tunnel or Subway 8 Single Track Section - In Trench	Mile Mile	\$ 2,350,080 \$ 2,350,080			0 \$	-			0 \$	-			0 \$	-
opanigle frack Section - in Helicii	iviile	φ <u>2,330,080</u>			0 \$	-			"	-			U \$	-
9 Freight Double Track - At Grade	Mile	\$ 2,839,552			0 \$	-			0 \$				0 \$	-
10 Freight Single Track - At Grade	Mile	\$ 1,549,312			0 \$	-			0 \$	-			0 \$	-
Earthwork Items														
1 Site Preparation - Undeveloped 2 Total Cut	Acre CY	\$ 9,216 \$ 6			8.84 \$ 0.00 \$	81,469			8.84 \$ 0.00 \$				8.84 \$ 231815.00 \$	81,469 1,495,485
3 Total Fill	CY	\$ 6			0.00 \$	-			0.00 \$				92726.00 \$	1,495,485 583,239
4 Borrow	CY	\$ 13			0.00 \$	-			0.00 \$	-			0.00 \$	-
5 Spoil 6 Landscape erosion Control	CY Acre	\$ 13 \$ 6,144			0.00 \$ 0.66 \$	4,055			0.00 \$ 0.66 \$				139089.00 \$ 2.87 \$	1,749,717 17,633
7 Security Fencing (Both sides of ROW)	Mile	\$ 144,384			0.00 \$	4,033			0.00 \$				0.22 \$	31,764
8 Special Drainage Facilities	5% Earl	hwork			\$	4,276			\$				\$	197,965
Structures, Tunnels, Walls														
1 Standard Structure (2 tracks)	Mile	\$ 34,972,672			0.00 \$	-			0.00 \$	-			0.00 \$	-
Standard Structure (4 tracks) 2 High Structure	Mile Mile	\$ 52,459,008 \$ 40,424,448			0.00 \$	=			0.00 \$	-			0.00 \$	-
3 Long Span Structure	Mile	\$ 61,919,232			\$	-			\$	-			\$	-
4 Waterway Crossing - Primary	Mile	\$ 85,342,208			\$	-			\$	-			\$	-
5 Waterway Crossing - Secondary (Irrigation Canal) 6 Twin Single Track Drill&Blast (<6 Miles)	Mile Mile	\$ 92,049,408 \$ 142,731,264			\$	-			\$	-			\$	-
7 Twin Single Track TBM (<6 Miles)	Mile	\$ 106,637,312			\$	-			\$	_			\$	-
8 Twin Single Track TBM w/3rd Tube (<6 Miles) 9 Double Track Drill & Blast	Mile Mile	\$ 176,720,896 \$ 146,887,680			0.00 \$	-			0.66 \$	97,368,727			0.66 \$	- 97,368,727
10 Double Track Mined (Soft Soil)	Mile	\$ 79,200,000			\$	-			\$	77,300,727			\$	- 47,300,727
Double Track TBM (<6 Miles)	Mile	\$ 106,637,312												
Double Track TBM w/3rd Tube (>6 Miles) 11 Seismic Chamber (Drill & Blast/Mined)	Mile ea	\$ 176,720,896 \$ 126,205,952			\$	-			· · · · · · · · · · · · · · · · · · ·	_			 	-
12 Crossovers	ea	\$ 442,368			\$	-			\$	-			\$	-
13 Cut & Cover Double Track Tunnel 14 Trench Long (2 tracks) (1000 + ft)	Mile Mile	\$ 131,246,080 \$ 57,524,224			0.00 \$ 0.00 \$	-			0.00 \$ 0.00 \$	-			0.00 \$	-
Trench Long (4 tracks) (1000 + ft)	Mile	\$ 86,286,336			0.00	-			0.00 \$	·				-
15 Trench Short (2 tracks) (<1000 ft) Trench Short (4 tracks) (<1000 ft)	Mile Mile	\$ 78,843,904			\$	-			\$	-			\$	-
16 Mechanical & Electrical for Tunnels	Mile	\$ 118,265,856 \$ 11,848,704			\$	-			\$	-			0.66 \$	7,854,255
17 Retaining Walls	Mile	\$ 8,613,888			0.00 \$	-			0.00 \$	-			\$	-
18 Containment Walls 19 Single Track Cut and Cover Subway	Mile Mile	\$ 5,907,456 \$ 131,246,080			\$	-			\$	-			\$ ¢	-
Four Track Drill & Blast	Mile	\$ 293,775,360			\$	-			\$	-			\$	-
Four Track Mined (Soft Soil)	Mile	\$ 158,400,000			\$	-			\$	-			0.00	
Four Track TBM (<6 Miles) Four Track TBM w/3rd Tube (>6 Miles)	Mile Mile	\$ 213,274,624 \$ 353,441,792											0.00 \$	-
Four Track Cut & Cover Tunnel	Mile	\$ 262,492,160			0.00 \$	-			0.00 \$	-			\$	-
Grade Separations														
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$ 13,284,352			\$	-			\$	-			\$	-
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$ 19,926,528			\$	-			\$	-			\$	-
2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) 3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea ea	\$ 2,759,680 \$ 2,029,568			\$	-			\$	-			\$ \$	-
4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 3,563,520			0 \$	-			0 \$	-			\$	-
5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea ea	\$ 3,593,216 \$ 2,850,816			\$	-			\$	-			\$	-
6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$ 2,850,816			\$	-			\$	-			\$	-
	•		. '		1 *			•	. ''		•	•	. 1 *	

COST ELEMENTS	l	UNIT UN	NIT PRICE		At-Grade	(2 Tracks)			At-Grad	e (4 Tracks)			Tunnel (2 to	racks - Mined)		
Subsection 1			e: 2009 (3rd													
		C	Quarter)	01 1 045 00	E 1.050.00	E		01 1 045 00	T - 1 050 00	E		01 1 045 00	0	E		
				Start: 315 + 00	End: 350 + 00	0.66	Miles	Start: 315 + 00	End: 350 + 00	0.66 N	iles	Start: 315 + 00	Start: 350 + 00	0.6	6 Miles	
Subsection Details		l l				Quant.	Cost			Quant.	Cost			Quant.	Cost	<u> </u>
Double Track At-Grade (Mile)				Start: 315 + 00	End: 350 + 00	0.66 Miles		Start: 315 + 00	End: 350 + 00	0.66 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Double Track Elevated (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Double Track Tunnel (Mile) Double Track Trench (Mile)			-	Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 315 + 00 Start: 0 + 00	End: 350 + 00	0.66 Miles 0.00 Miles		Start: 315 + 00 Start: 0 + 00	End: 350 + 00	0.66 Miles 0.00 Miles		
Four Track Construction/Reconstruction At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Elevated (Mile)			-	Start: 0 + 00	Ena. 0 1 00	0.00 Miles		Start: 0 + 00	End. 0 1 00	0.00 Miles		Start: 0 + 00	End. 0 1 00	0.00 Miles		
Four Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Trench (Mile)		- 16	1 200 704	Start: 0 + 00		0.00 Miles	.	Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	Φ.	
7 Street Bridging HSR Trench 8 Minor Crossing Closures		a \$	1,398,784 87,040				\$ - \$			\$	-			-	\$ \$	-
William Grossing Glosdies		u v	07,010				•			•				Ü	Ψ	
Building Items																
1 Intermediate Passenger Stations		Each \$	-				\$ -			\$	-				\$	-
2 Terminal Passenger Stations Caltrain Passenger Station - At-Grade		Each \$ Each \$	- \$15,000,000				\$ - ¢			\$	-				\$	-
Caltrain Passenger Station - On Structure			\$15,000,000				\$ -			\$	-				\$	-
Caltrain Passenger Station - In Tunnel or Subway		Each \$	\$15,000,000				\$ -			\$	-				\$	-
Caltrain Passenger Station - In Trench			\$15,000,000				-			\$	-				\$	-
3 Maintenance Facility 4 Parking - Structures			123,921,884				-			\$	-				\$	-
5 Parking - At Grade		space \$	-				\$ - \$ -			\$	-				\$	-
							-									
Rail & Utility Relocation																
1 Single Track Relocation (Temporary) 2 Single Track Relocation (Permanent)		Aile \$	2,000,896 2,000,896				\$ -			\$	-				\$	-
3 Single Track Renoval		Mile \$	130,048				\$ - \$ -			\$	-				\$	-
4 Major Utility Relocations - Dense Urban		Aile \$	1,548,288				\$ -			\$	-				\$	-
5 Major Utility Relocations - Urban		/lile \$	1,084,416				\$ -			\$	-				\$	-
6 Major Utility Relocations - Dense Suburban		/lile \$	775,168				\$ -			\$	-				\$	-
7 Major Utility Relocations - Suburban 8 Major Utility Relocations - Undeveloped		Mile \$	464,896 30,720				\$ - \$ -			\$	-				\$	-
o major ounty relocations of developed	l'v	AIIIC \$	30,720				Ψ			Ψ					Ψ	
ROW (NOT INCLUDED)																
ROW required for each segment	١.		0.707.004				•								•	
1 Dense Urban 2 Urban		Acre \$	2,786,321 1,371,510				\$ - ¢			\$	-				\$	-
3 Dense Suburban		Acre \$	908,134				\$ -			\$	-				\$	
4 Suburban		cre \$	208,418				\$ -			\$					\$	-
5 Undeveloped		Acre \$	3,642				\$ -			\$	-				\$	-
ROW required for Temp. Construction Easement 1 Dense Urban		Acre Acre					¢			¢					\$	-
2 Urban		Acre					\$ -			\$	-				\$	_
3 Dense Suburban	А	Acre					\$ -			\$	-				\$	-
4 Suburban		cre					-			\$	-				\$	-
5 Undeveloped Right-of-Way Required for Stations, Maintenance & Parking Facilities	A	Acre					\$ -			\$	-				\$	-
6 Dense Urban	А	Acre \$	2,786,321				\$ -			\$					\$	
7 Urban	A	Acre \$	1,371,510				\$ -			\$					\$	
8 Dense Suburban		Acre \$	908,134				\$ -			\$	-				\$	-
9 Suburban 10 Undeveloped		Acre \$	208,418 3,642				\$ - \$ -			\$					\$	-
Environmental Mitigation = 3% Line Costs	[,	toro ¢	0,012				\$ 44,460			\$	3,058,991				\$ 3	3,374,877
System Elements	1.	Aile A	2 070 000				¢ 1070.450			0//	1 272 452			0.77	¢ 1	272 150
1 Signaling (ATC) 2 Communications (w/ Fiber Optic Backbone)		Mile \$ Mile \$	2,070,000 540,000			0.66 0.66				0.66 \$ 0.66 \$	1,372,159 357,955			0.66 0.66		,372,159 357,955
3 Wayside Protection System		Aile \$	108,000			0.66				0.66 \$	71,591			0.66		71,591
Electrification Items	1.	Aile A	1 170 000				¢ 775.570			0//	775 570			0.77	¢	775 570
1 Traction Power supply 2 Traction Power Distribution		Mile \$	1,170,000 1,485,000			0.66 0.66				0.66 \$ 0.66 \$	775,568 984,375			0.66 0.66		775,568 984,375
Z Tracaciti Ower Distribution	Subtotal	,,,,,,	1,700,000				\$ 5,088,102			\$	108,586,997			0.00		,432,417
Program Implementation Costs (per screening)							\$ 1,297,466			\$	27,689,684					,455,266
Program Implementation Costs																
Contingencies (per screening) (25%)							\$ 1,272,026			•	27,146,749				\$ 20	,858,104
Containgencies (per screening) (2070)							ψ 1,272,020				21,140,149				ψ 29	,000,104
Subtotal	<u> </u>						\$ 7,657,594			\$	163,423,430				\$ 179	,745,787
Subtotal (Dounded)							0000000				162 000 000	·				000 000

COST ELEMENTS	UNIT	UNIT PRICE		At-Grade	(2 Tracks)				At-Grade	(4 Tracks)			Tunnel (2 tr	racks - Mined)	
Subsection 1	5,1	Base: 2009							c.ado	<u>,</u>			. 2711101 (2.11	F	
		(3rd Quarter)	Start: 350 + 00	End: 376 + 00	N // Q	Miles		Start: 350 + 00	End: 376 + 00	F 0.491	Miles	Start: 350 + 00	Start: 376 + 00	0.49 Mile	25
			Start. 330 + 00	LIIU. 370 + 00	0.47	WITES		Start. 330 + 00	LIIU. 370 + 00	0.471	MILES	Start. 330 + 00	Start. 370 + 00	0.47 1/1116	23
Subsection Details			C++ 2E0 00	F1 27/ 00	Quant.	Cost		Ctt 0 00	F1 0 00	Quant.	Cost	C++ 0 00	F1 0 00	Quant.	Cost
Double Track At-Grade (Mile) Double Track Elevated (Mile)			Start: 350 + 00 Start: 0 + 00	End: 376 + 00	0.49 Miles 0.00 Miles		-	Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	
Double Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		-	Start: 0 + 00		0.00 Miles		Start: 350 + 00	End: 376 + 00	0.49 Miles	
Double Track Trench (Mile)			Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		ŀ	Start: 350 + 00	End: 376 + 00	0.49 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile) Four Track Tunnel (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	-	ŀ	Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	
Four Track Trench (Mile)			Start: 0 + 00		0.00 Miles	-		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Section - Total					0.40	4 400	1 001			0.00				0.00	
1 Double Track Section - At Grade 2 Double Track Section - On Structure	Mile Mile	\$ 2,100,224 \$ 4,700,160			0.49 0.00		34,201			0.00 0.00	\$ - \$ -			0.00 \$ 0.00 \$	-
3 Double Track Section - In Tunnel or Subway	Mile	\$ 4,700,160			0.00		-			0.00	\$ -			0.49 \$	2,314,473
4 Double Track Section - In Trench	Mile	\$ 4,700,160			0.00	\$	-			0.00	\$ -			0.00 \$	-
Form Total Coefficient Total															
Four Track Section - Total Four-track Section - At Grade	Mile	\$ 4,200,448			0.00	\$	_			0.49	\$ 2,068,402			0.00 \$	_
Four-Track Section - On Structure	Mile	\$ 9,400,320			0.00	\$	-			0.47	\$ 2,000,402			0.00 \$	-
Four-Track Section - In Tunnel or Subway	Mile	\$ 9,400,320			0	\$	-			0	\$ -			0 \$	-
Four-Track Section - In Trench	Mile	\$ 9,400,320			0	\$	-			0	\$ -			0 \$	-
Single Track - Total															
5 Single Track Section - At Grade	Mile	\$ 1,549,312			0	\$	-			0	\$ -			0 \$	-
6 Single Track Section - On structure	Mile	\$ 2,350,080			0	\$	-			0	\$ -			0 \$	-
7 Single Track Section - In Tunnel or Subway	Mile	\$ 2,350,080			0	\$	-			0	\$ -			0 \$	-
8 Single Track Section - In Trench	Mile	\$ 2,350,080			0	\$	-			0	\$ -			0 \$	-
9 Freight Double Track - At Grade	Mile	\$ 2,839,552			n	\$	_			n	\$ -			0 \$	-
10 Freight Single Track - At Grade	Mile	\$ 1,549,312			0	\$	-			0	\$ -			0 \$	-
Earthwork Items					, 53		0.540			. 57	A (0.540			, F7 A	(0.540
1 Site Preparation - Undeveloped 2 Total Cut	Acre CY	\$ 9,216 \$ 6			6.57 0.00		0,549			6.57 0.00	\$ 60,549 \$ -			6.57 \$ 529629.00 \$	60,549 3,416,743
3 Total Fill	CY	\$ 6			0.00		-			0.00	\$ -			211851.00 \$	1,332,526
4 Borrow	CY	\$ 13			0.00		-			0.00	\$ -			0.00 \$	-
5 Spoil	CY	\$ 13			0.00		-			0.00				317778.00 \$	3,997,596
6 Landscape erosion Control	Acre Mile	\$ 6,144 \$ 144,384			0.49		3,011			0.49 0.49	\$ 3,011 \$ 71,098			6.57 \$ 0.49 \$	40,366 70,748
7 Security Fencing (Both sides of ROW) 8 Special Drainage Facilities	5% Ear				0.00		3,178			0.49	\$ 71,098 \$ 6,733			0.49 \$	445,926
o operar brainage racinitos	070 Eur					•	5,176				0,700			ľ	110,720
Structures, Tunnels, Walls															
1 Standard Structure (2 tracks)	Mile	\$ 34,972,672			0.00		-			0.00	-			0.00 \$	-
Standard Structure (4 tracks) 2 High Structure	Mile Mile	\$ 52,459,008 \$ 40,424,448			0.00	\$	-			0.00	\$ -			0.00 \$	-
3 Long Span Structure	Mile	\$ 61,919,232				\$	-				\$ -			l s	-
4 Waterway Crossing - Primary	Mile	\$ 85,342,208				\$	-				\$ -			\$	-
5 Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$ 92,049,408				\$	-				\$ -			\$	-
6 Twin Single Track Drill&Blast (<6 Miles)	Mile	\$ 142,731,264				\$	-				\$ -			\$	-
7 Twin Single Track TBM (<6 Miles) 8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile Mile	\$ 106,637,312 \$ 176,720,896				\$	-				\$ - \$ -			\$	-
9 Double Track Drill & Blast	Mile	\$ 146,887,680			0.00	\$	-			0.00	\$ -			0.49 \$	72,331,055
10 Double Track Mined (Soft Soil)	Mile	\$ 79,200,000			2.30	\$	-				\$ -			\$	-
Double Track TBM (<6 Miles)	Mile	\$ 106,637,312													
Double Track TBM w/3rd Tube (>6 Miles) 11 Seismic Chamber (Drill & Blast/Mined)	Mile	\$ 176,720,896 \$ 126,205,952				¢					¢			•	
11 Seismic Chamber (Driil & Biastivilned) 12 Crossovers	ea ea	\$ 126,205,952 \$ 442,368				\$					\$ - \$ -			\$	-
13 Cut & Cover Double Track Tunnel	Mile	\$ 131,246,080			0.00		-			0.00	\$ -			0.00 \$	-
14 Trench Long (2 tracks) (1000 + ft)	Mile	\$ 57,524,224			0.00		-			0.00	\$ -			\$	-
Trench Long (4 tracks) (1000 + ft)	Mile	\$ 86,286,336				d					¢				
15 Trench Short (2 tracks) (<1000 ft) Trench Short (4 tracks) (<1000 ft)	Mile Mile	\$ 78,843,904 \$ 118,265,856				\$	-				\$ -			\$	-
16 Mechanical & Electrical for Tunnels	Mile	\$ 118,205,850				\$	_				\$ -			0.49 \$	5,834,589
17 Retaining Walls	Mile	\$ 8,613,888			0.00	\$	-			0.00	\$ -			\$	0,007,007 -
18 Containment Walls	Mile	\$ 5,907,456				\$	-				\$ -			\$	-
19 Single Track Cut and Cover Subway	Mile	\$ 131,246,080				\$	-				\$ -			\$	-
Four Track Drill & Blast Four Track Mined (Soft Soil)	Mile Mile	\$ 293,775,360 \$ 158,400,000				\$	-				• - •			\$	-
Four Track TBM (<6 Miles)	Mile	\$ 213,274,624				Ψ	-				-			0.00 \$	-
Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 353,441,792												\$	-
Four Track Cut & Cover Tunnel	Mile	\$ 262,492,160			0.00	\$	-			0.00	\$ -			\$	-
Crade Senerations															
Grade Separations 1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$ 13,284,352				s					\$ -			¢	_
Roadway Crossing FISR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$ 19,926,528				\$	-				\$ -			\$	-
2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$ 2,759,680				\$	-				\$ -			\$	-
3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$ 2,029,568				\$	-				\$ -			\$	-
4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 3,563,520			0	\$	-			0	-			\$	-
5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea ea	\$ 3,593,216 \$ 2,850,816				\$	-				\$ - \$ -			\$	-
6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$ 3,171,328				\$	-				\$ -			\$	-
, , , , , , , , , , , , , , , , , , ,			•	•		• 1						•	. '	1.*	

COST ELEMENTS	l	JNIT UNIT	F PRICE		At-Grade	(2 Tracks)				At-Grade	(4 Tracks)				Tunnel (2 tr	acks - Mined)		
Subsection 1		Bas	e: 2009			<u> </u>					<u>`</u>				·			
		(3rd (Quarter)	Start: 350 + 00	End: 376 + 00	Γ 0.49	9 Miles		Start: 350 + 00	End: 376 + 00	F n	49 Miles		Start: 350 + 00	Start: 376 + 00	0.49) Miles	
				Start: 550 + 60	End. 370 1 00				Start: 350 1 00	E11a. 370 1 00		T7 WIIICS		Start. 330 1 00	Start. 370 + 00	0.47	WIIICS	
Subsection Details				CL 050 00	E 1 27/ 00	Quant.		Cost	CI 1 0 00	F 1 0 00	Quant.		Cost		F 1 0 00	Quant.		Cost
Double Track At-Grade (Mile) Double Track Elevated (Mile)				Start: 350 + 00 Start: 0 + 00	End: 376 + 00	0.49 Miles 0.00 Miles	-		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles			Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		
Double Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles	1		Start: 0 + 00		0.00 Miles			Start: 350 + 00	End: 376 + 00	0.49 Miles		
Double Track Trench (Mile)				Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles		
Four Track Construction/Reconstruction At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles	4		Start: 350 + 00	End: 376 + 00	0.49 Miles	_		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Elevated (Mile) Four Track Tunnel (Mile)				Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	-		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles			Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		
Four Track Trench (Mile)				Start: 0 + 00		0.00 Miles	1		Start: 0 + 00		0.00 Miles			Start: 0 + 00	End: 0 + 00	0.00 Miles		
7 Street Bridging HSR Trench	e		,398,784				\$	-				\$	-			-	\$	-
8 Minor Crossing Closures	e	a \$	87,040				\$	-				\$	-			0	\$	-
Building Items																		
1 Intermediate Passenger Stations		Each \$	-				\$	-				\$	-				\$	-
2 Terminal Passenger Stations		Each \$	-				\$	-				\$	-				\$	-
Caltrain Passenger Station - At-Grade Caltrain Passenger Station - On Structure			5,000,000				\$	-				\$	-				\$	-
Caltrain Passenger Station - In Tunnel or Subway			,000,000				\$	-				\$	-				\$	
Caltrain Passenger Station - In Trench			,000,000				\$	-				\$	-				\$	-
3 Maintenance Facility			3,921,884				\$	-				\$	-				\$	-
4 Parking - Structures 5 Parking - At Grade		pace \$	-				\$	-				\$	-				\$	-
5 Parking - At Grade	S	pace \$	-				\$	-				2	-				\$	-
Rail & Utility Relocation																		
1 Single Track Relocation (Temporary)			2,000,896			0.49	\$	980,439			0.	49 \$	980,439				\$	-
2 Single Track Relocation (Permanent)			2,000,896					40.704					, o = o ,				\$	-
3 Single Track Removal 4 Major Utility Relocations - Dense Urban			130,048 ,548,288			0.49		63,724 758,661				49 \$ 49 \$	63,724 758,661				\$	-
5 Major Utility Relocations - Urban			,084,416			0.47	\$	730,001			0.	47 \$ \$	730,001				\$	-
6 Major Utility Relocations - Dense Suburban			775,168				\$	-				\$	-				\$	-
7 Major Utility Relocations - Suburban			464,896				\$	-				\$	-				\$	-
8 Major Utility Relocations - Undeveloped	N	file \$	30,720				\$	-				\$	-				\$	-
ROW (NOT INCLUDED)																		
ROW required for each segment																		
1 Dense Urban			2,786,321				\$	-				\$	-				\$	-
2 Urban 3 Dense Suburban		.cre \$ 1	,371,510 908,134				\$	-				\$	-				\$	-
4 Suburban			208,418				\$	-				\$					\$	-
5 Undeveloped		cre \$	3,642				\$	-				\$	-				\$	-
ROW required for Temp. Construction Easement		cre															\$	-
1 Dense Urban		cre					\$	-				\$	-				\$	-
2 Urban 3 Dense Suburban		cre cre					\$	-				\$	-				\$	-
4 Suburban		cre					\$	-				\$					\$	-
5 Undeveloped		cre					\$	-				\$					\$	-
Right-of-Way Required for Stations, Maintenance & Parking Facilities																		
6 Dense Urban		cre \$ 2					\$	-				\$	-				\$	-
7 Urban 8 Dense Suburban			,371,510 908,134				\$	-				\$					\$	-
9 Suburban			208,418				\$					\$					\$	_
10 Undeveloped		cre \$	3,642				\$	-				\$	-				\$	-
Environmental Mitigation = 3% Line Costs							\$	87,113				\$	120,379				\$	2,695,337
System Elements																		
1 Signaling (ATC)	M	file \$ 2	2,070,000			0.49	9 \$	1,019,318			0.	49 \$	1,019,318]	0.49	\$	1,019,318
2 Communications (w/ Fiber Optic Backbone)	M	file \$	540,000			0.49	9 \$	265,909			0.	49 \$	265,909			0.49	\$	265,909
3 Wayside Protection System	M	file \$	108,000			0.49	\$	53,182			0.	49 \$	53,182			0.49	\$	53,182
Electrification Items																		
1 Traction Power supply	M	file \$ 1	,170,000			0.49	\$	576,136			0	49 \$	576,136			0.49	\$	576,136
2 Traction Power Distribution			,485,000			0.49		731,250				49 \$	731,250			0.49		731,250
	Subtotal						\$	5,636,671				\$	6,778,791				\$	95,185,704
Program Implementation Costs (per screening)							\$	1,437,351				\$	1,728,592				\$	24,272,354
Program Implementation Costs																		
Contingencies (per screening) (25%)							\$	1,409,168				\$	1,694,698				\$	23,796,426
							1.											
Subtotal (Pounded)							\$	8,483,190				\$	10,202,080					143,254,484

Subtotal (Rounded) \$ 8,000,000 \$ 10,000,000 \$ 143,000,000

COST ELEMENTS	UNIT UNIT PRICE		At-Grade	(2 Tracks)			At-Grade	e (4 Tracks)			Tunnel (2	tracks - Mined)	
Subsection 1	Base: 2009 (3rd			2				0			•		
	Quarter)	Start: 376 + 00	End: 450 + 00	G 1401	Miles	Start: 376 + 00	End: 450 + 00	G 1.40 Mi	iles	Start: 376 + 00	Start: 450 ± 00	G 1.40	Miles
		2.2. 1. 0. 0 1 00				2.2				212.1.070700	212.11 100 1 00		
Subsection Details Double Track At-Grade (Mile)		Start: 376 + 00	End: 450 + 00	Quant. 1.40 Miles	Cost	Start: 376 + 00	End: 450 + 00	Quant. 1.40 Miles	Cost	Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost
Double Track Elevated (Mile)		Start: 0 + 00	L110. 430 + 00	0.00 Miles		Start: 0 + 00	E11a. 430 + 00	0.00 Miles		Start: 0 + 00	Liid. 0 + 00	0.00 Miles	
Double Track Tunnel (Mile)		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 376 + 00	End: 450 + 00	1.40 Miles	
Double Track Trench (Mile) Four Track Construction/Reconstruction At-Grade (Mile)		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	
Four Track Elevated (Mile)		Start: 0 + 00	Enail 6 + 60	0.00 Miles		Start: 0 + 00	Ellar o v oo	0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Tunnel (Mile) Four Track Trench (Mile)		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00 End: 0 + 00	0.00 Miles 0.00 Miles	
Double Track Section - Total		Start. 0 + 00		0.00 Willes		Start. 0 + 00		0.00 Willes		Start. 0 + 00	Liid. 0 + 00	0.00 Miles	
1 Double Track Section - At Grade	Mile \$ 2,100,224			1.40				0.66 \$	1,389,330			0.00	
2 Double Track Section - On Structure 3 Double Track Section - In Tunnel or Subway	Mile \$ 4,700,160 Mile \$ 4,700,160			0.00 0.00				0.00 \$ 0.74 \$	3,478,118			0.00 1.40	
4 Double Track Section - In Trench	Mile \$ 4,700,160			0.00				0.00 \$				0.00	
Four Track Section - Total													
Four-track Section - At Grade	Mile \$ 4,200,448			0.00	\$ -			0.00 \$	-			0.00	\$ -
Four-Track Section - On Structure	Mile \$ 9,400,320			0	\$ -			0 \$	-			0	
Four-Track Section - In Tunnel or Subway Four-Track Section - In Trench	Mile \$ 9,400,320 Mile \$ 9,400,320			0	\$ - \$ -			0 \$	-			0	
	7,100,020			J	,								•
Single Track - Total 5 Single Track Section - At Grade	Mile \$ 1,549,312			۸	¢			0 4				0	¢
6 Single Track Section - At Grade	Mile \$ 1,349,312 Mile \$ 2,350,080			0	\$ -			0 \$	-			0	
7 Single Track Section - In Tunnel or Subway	Mile \$ 2,350,080			0	\$ -			0 \$	-			0	
8 Single Track Section - In Trench	Mile \$ 2,350,080			0	-			0 \$	-			0	> -
9 Freight Double Track - At Grade	Mile \$ 2,839,552			0	\$ -			0 \$	-			0	
10 Freight Single Track - At Grade	Mile \$ 1,549,312			0	\$ -			0 \$	-			0	\$ -
Earthwork Items													
1 Site Preparation - Undeveloped	Acre \$ 9,216			18.69				18.69 \$				18.69	
2 Total Cut 3 Total Fill	CY \$ 6 CY \$ 6			0.00 0.00				0.00 \$ 0.00 \$	-			72314.81 28925.93	
4 Borrow	CY \$ 13			0.00				0.00 \$	-			0.00	\$ -
5 Spoil	CY \$ 13			0.00				0.00 \$	4.547			43388.89	
6 Landscape erosion Control 7 Security Fencing (Both sides of ROW)	Acre \$ 6,144 Mile \$ 144,384			0.74 0.00				0.74 \$ 0.00 \$	4,547			0.90 0.07	
8 Special Drainage Facilities	5% Earthwork				\$ 8,838			\$	8,838				\$ 69,086
Structures, Tunnels, Walls													
1 Standard Structure (2 tracks)	Mile \$ 34,972,672			0.00	\$ -			0.00 \$	-			0.00	\$ -
Standard Structure (4 tracks)	Mile \$ 52,459,008			0.00	\$ -			0.00 \$	-			0.00	-
2 High Structure 3 Long Span Structure	Mile \$ 40,424,448 Mile \$ 61,919,232				\$ - \$ -			\$	-				\$ - \$ -
4 Waterway Crossing - Primary	Mile \$ 85,342,208				\$ -			\$	-				\$ -
5 Waterway Crossing - Secondary (Irrigation Canal)	Mile \$ 92,049,408							\$	-				-
6 Twin Single Track Drill&Blast (<6 Miles) 7 Twin Single Track TBM (<6 Miles)	Mile \$ 142,731,264 Mile \$ 106,637,312				\$ -			\$	-				\$ - \$ -
8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile \$ 176,720,896				\$ -			\$	-				\$ -
9 Double Track Drill & Blast 10 Double Track Mined (Soft Soil)	Mile \$ 146,887,680 Mile \$ 79,200,000			0.00	\$ - \$ -			0.74 \$	108,696,883			1.40	\$ 205,865,309 \$
Double Track TBM (<6 Miles)	Mile \$ 106,637,312				•				-				·
Double Track TBM w/3rd Tube (>6 Miles)	Mile \$ 176,720,896				¢								¢
11 Seismic Chamber (Drill & Blast/Mined) 12 Crossovers	ea \$ 126,205,952 ea \$ 442,368				\$ -			\$	-				\$ - \$ -
13 Cut & Cover Double Track Tunnel	Mile \$ 131,246,080			0.00				0.00 \$				0.00	*
14 Trench Long (2 tracks) (1000 + ft) Trench Long (4 tracks) (1000 + ft)	Mile \$ 57,524,224 Mile \$ 86,286,336			0.00	\$ -			0.00 \$	-				-
15 Trench Short (2 tracks) (<1000 ft)	Mile \$ 78,843,904				\$ -			\$	-				\$ -
Trench Short (4 tracks) (<1000 ft)	Mile \$ 118,265,856 Mile \$ 11,848,704				¢							1 40	¢ 1/ /0/ 100
16 Mechanical & Electrical for Tunnels 17 Retaining Walls	Mile \$ 11,848,704 Mile \$ 8,613,888			0.00	\$ -			0.00 \$	-			1.40	\$ 16,606,138 \$ -
18 Containment Walls	Mile \$ 5,907,456				\$ -			\$	-				\$ -
19 Single Track Cut and Cover Subway Four Track Drill & Blast	Mile \$ 131,246,080 Mile \$ 293,775,360				\$ - ¢			\$	-				\$ - \$
Four Track Mined (Soft Soil)	Mile \$ 158,400,000				\$ -			\$	-				-
Four Track TBM (<6 Miles)	Mile \$ 213,274,624												\$ -
Four Track TBM w/3rd Tube (>6 Miles) Four Track Cut & Cover Tunnel	Mile \$ 353,441,792 Mile \$ 262,492,160			0.00	\$ -			0.00 \$	_				\$ - \$ -
	202,172,100			3.30	•								
Grade Separations 1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea \$ 13,284,352				¢								¢
Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea \$ 13,284,352 ea \$ 19,926,528				\$ -			\$	-				\$ -
2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea \$ 2,759,680				\$ -			\$	-				\$ -
3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) 4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea \$ 2,029,568 ea \$ 3,563,520			n	\$ - \$ -			0 \$	-			l I	\$ - \$ -
5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea \$ 3,593,216			U	\$ -			\$	-				\$ -
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea \$ 2,850,816	1			\$ -		1	\$	_	l	Ī	1	\$ -
6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea \$ 3,171,328				\$ -			\$					\$ -

COST ELEMENTS	l	UNIT	UNIT PRICE		At-Grade	(2 Tracks)				At-Grade	e (4 Tracks)			Tunnel (2 t	racks - Mined)		
Subsection 1			Base: 2009 (3rd			_											
			Quarter)	Start: 276 + 00	End: 450 + 00	G 1 1/10	0 Miles		Start: 376 + 00	End: 450 + 00	G 1.40	Miles	Start: 376 + 00	Start: 450 + 00	G 1.4	0 Miles	
				Start. 370 + 00	E110. 450 + 00	1.40	U IVIIIeS		Start. 370 + 00	E110. 450 + 00	1.40	Miles	Start. 370 + 00	Start. 450 ± 00	1.4	J WIIIeS	
Subsection Details						Quant.		Cost			Quant.	Cost			Quant.	Co	ost
Double Track At-Grade (Mile)				Start: 376 + 00	End: 450 + 00	1.40 Miles	-		Start: 376 + 00	End: 450 + 00	1.40 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Double Track Elevated (Mile) Double Track Tunnel (Mile)				Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	4		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 376 + 00	End: 450 + 00	0.00 Miles 1.40 Miles		
Double Track Turner (Mile)				Start: 0 + 00	L110. 0 + 00	0.00 Miles	1		Start: 0 + 00	L110.0 + 00	0.00 Miles		Start: 0 + 00	L110. 450 + 00	0.00 Miles		
Four Track Construction/Reconstruction At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Elevated (Mile)				Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Four Track Tunnel (Mile) Four Track Trench (Mile)				Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	-		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00 End: 0 + 00	0.00 Miles 0.00 Miles		
7 Street Bridging HSR Trench	е	a \$	\$ 1,398,784	3tart. 0 + 00		0.00 Miles	\$	-	3tart. 0 + 00		0.00 Willes	\$ -	Start. 0 + 00	Liiu. 0 + 00		\$	-
8 Minor Crossing Closures		a \$					\$	-				\$ -			0	\$	-
Building Items 1 Intermediate Passenger Stations		Each \$	*				c					¢				¢	
2 Terminal Passenger Stations		Each \$					\$	-				\$ -				\$	-
Caltrain Passenger Station - At-Grade		Each	\$15,000,000			1	\$	15,000,000			1	\$ 15,000,000				\$	-
Caltrain Passenger Station - On Structure		Each	\$15,000,000				\$	-				\$ -				\$	-
Caltrain Passenger Station - In Tunnel or Subway		Each	\$15,000,000				\$	-				\$ -			1	\$ 1	15,000,000
Caltrain Passenger Station - In Trench 3 Maintenance Facility		Each \$	\$15,000,000 \$ 123,921,884				\$	-				\$ -				\$	-
4 Parking - Structures		space \$					\$	-				\$ -				\$	-
5 Parking - At Grade		space \$	\$ -				\$	-				\$ -				\$	-
Rail & Utility Relocation 1 Single Track Relocation (Temporary)		/lile \$	\$ 2,000,896			0.70	\$	1,400,627			0.70	\$ 1,400,627				\$	
2 Single Track Relocation (Permanent)			\$ 2,000,896			0.70) \$	1,400,027			0.70	\$ 1,400,027				\$	-
3 Single Track Removal	N	∕lile \$	\$ 130,048			0.70	\$	91,034			0.70					\$	-
4 Major Utility Relocations - Dense Urban			\$ 1,548,288			0.74	1 \$	1,145,733			0.74					\$	-
5 Major Utility Relocations - Urban 6 Major Utility Relocations - Dense Suburban			\$ 1,084,416 \$ 775,168				\$	-				\$ -				\$	-
7 Major Utility Relocations - Suburban			\$ 775,100 \$ 464,896				\$	-				\$ -				\$	-
8 Major Utility Relocations - Undeveloped			\$ 30,720				\$	-				\$ -				\$	-
ROW (NOT INCLUDED)																	
ROW required for each segment 1 Dense Urban	Δ	Acre \$	\$ 2,786,321				\$	-				\$ -				\$	-
2 Urban			\$ 1,371,510				\$					\$ -				\$	-
3 Dense Suburban		Acre \$					\$	-				\$ -				\$	-
4 Suburban 5 Undeveloped			\$ 208,418				\$	-				-				\$	-
ROW required for Temp. Construction Easement		Acre \$	\$ 3,642				\$	-				-			0	\$	-
1 Dense Urban		Acre					\$					\$ -			Ŭ	\$	-
2 Urban		Acre					\$	-				\$ -				\$	-
3 Dense Suburban		Acre					\$	-				\$ -				\$	-
4 Suburban 5 Undeveloped		Acre Acre					\$					\$ -				\$	
Right-of-Way Required for Stations, Maintenance & Parking Facilities	'	1010					*					•				*	
6 Dense Urban		Acre \$					\$	-				\$ -				\$	-
7 Urban			\$ 1,371,510 \$ 908,134				\$	-				\$ -				\$	
8 Dense Suburban 9 Suburban		Acre \$					\$	-				\$ - \$ -				\$	
10 Undeveloped		Acre \$					\$	-				\$ -				\$	-
Environmental Mitigation = 3% Line Costs							\$	622,995				\$ 3,941,620				\$	7,365,288
System Floments																	
System Elements 1 Signaling (ATC)	N.	/lile \$	\$ 2,070,000			1.40	\$	2,901,136			1.40	\$ 2,901,136			1.40	\$	2,901,136
2 Communications (w/ Fiber Optic Backbone)	N	∕lile \$	\$ 540,000			1.40	\$	756,818			1.40	\$ 756,818			1.40	\$	756,818
3 Wayside Protection System	N	/lile \$	\$ 108,000			1.40	\$	151,364			1.40	\$ 151,364			1.40	\$	151,364
Electrification Itams																	
Electrification Items 1 Traction Power supply		/lile \$	\$ 1,170,000			1.40) s	1,639,773			1.40	\$ 1,639,773			1.40	\$	1,639,773
2 Traction Power Distribution			\$ 1,485,000			1.40		2,081,250			1.40				1.40		2,081,250
	Subtotal							28,919,828				\$ 142,859,289				\$ 26	60,405,226
Program Implementation Costs (per screening)							\$	7,374,556				\$ 36,429,119				\$ 6	66,403,333
Program Implementation Costs																	
Contingencies (per screening) (25%)							\$	7,229,957				\$ 35,714,822				\$ 6	55,101,306
3,117																	
Subtotal							\$	43,524,342				\$ 215,003,230				\$ 39	91,909,864
Subtotal (Rounded)							r 4.	4 000 000				\$ 215,000,000				\$ 302	000 000

	2A (4.2 miles)	2B (1.0 miles)	2C1 (1.0 miles)			2C2 (1.3 miles)				2D (1.2 miles)	
Subsection 2	At Grade	Berm	Berm	Aerial Viaduct	Berm	At Grade	Open Trench (HST Only)	Covered Trench/Tunnel (HST Only)	At Grade	Open Trench (HST Only)	Covered Trench (HST Only)
Capital Cost (\$2009 in Millions) does not include ROW	\$74	\$66	\$51 (2 tracks)		\$95 (3 tracks); \$57 (2 tracks)	\$28 (3 tracks); \$26 (2 tracks)		\$295 (1 track); \$331 (2 tracks)	\$37 (3 tracks); \$14 (2 tracks)	\$ 50	\$293 (1 track); \$342 (2 tracks)
Acquisition Cost of Permanent ROW	Highest	Medium	Medium	Medium	Medium	Highest	Medium	Lowest	Highest	Medium	Lowest
Notes:	1. Existing 4 tracks extends from the Caltrain Bayshore Station to just north of the US 101 overpass. 2. Caltrain South San Francisco Station	Linden Ave and Scott St converted to undercrossings.	1. Assume Caltrain 2 track grade separation project completed (includes San Bruno Ave, San Mateo Ave, and Angus Ave converted to undercrossings).	Caltrain-1 HST) - 1. Three tracks on existing Caltrain alignment for approach to Caltrain and HST Millbrae station. Must be combined with 1 track open trench or tunnel option. 2 tracks (2 Caltrain) - 1. Two tracks on existing Caltrain alignment for approach to Caltrain Millbrae station. Must be combined with 2 track open trench or tunnel	o .	3 tracks (2 Caltrain-1 HST) - 1. Three tracks on existing Caltrain alignment for approach to Caltrain and HST Millbrae station. Must be combined with 1 track open trench or tunnel option. 2 tracks (2 Caltrain) - 1. Two tracks on existing Caltrain alignment for approach to Caltrain Millbrae station. 3. Center St and Santa Paula (Pedestrian) converted to an overcrossings. Must be combined with 2 track open trench or tunnel option.	Millbrae station. <i>Must</i>	alignment for approach to HST Millbrae station. Must be combined with 3 track aerial viaduct, berm, or at grade option. 2 tracks - 1. Two tracks on new alignment for approach to HST	3 tracks (2 Caltrain-1 HST) - 1. Three tracks on existing Caltrain alignment for Caltrain and HST Millbrae station. Must be combined with 1 track open trench or tunnel option. 2. Caltrain Millbrae Station. 3. HST Millbrae Station (1 platform) 2 tracks (2 Caltrain)- 1. Two tracks on existing Caltrain alignment for Caltrain Millbrae station. Must be combined with 2 track open trench or tunnel option.	option. 2. HST Millbrae station (1 platform) 2 tracks - 1. Two tracks on new alignment for HST Millbrae station.	alignment for HST Millbrae station. Must be combined with 3 track at grade option. 2. HST Millbrae station (1 platform) 2 tracks - 1. Two tracks on new alignment for HST Millbrae station. Must be combined with 2 track at grade option. 2. HST Millbrae

ادرد	COST ELEMENTS	UNIT	UI	NIT PRICE		At-0	Grade		
sut	osection 2			Base: 2009 rd Quarter)	Start: 450 + 00	End: 671 + 00	A 4.191	Miles	<u> </u>
			(3)	iu Quai tei)					
	section Details ible Track At-Grade (Mile)				Start: 450 + 00	End: 671 + 00	Quant. 4.19 Miles		Cost
	ible Track Al-Grade (Mile)				Start: 0 + 00	L11u. 071 + 00	0.00 Miles		
	ible Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles		
	ible Track Trench (Mile)				Start: 0 + 00		0.00 Miles		
	r Track Construction/Reconstruction At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		
	r Track Elevated (Mile)				Start: 0 + 00		0.00 Miles		
ou	r Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles		
ou	r Track Trench (Mile)				Start: 0 + 00		0.00 Miles		
	Double Track Section - Total								
1	Double Track Section - At Grade	Mile	\$	2,100,224			4.19	\$	8,790,710
2	Double Track Section - On Structure	Mile	\$	4,700,160			0.00	\$	
3	Double Track Section - In Tunnel or Subway	Mile	\$	4,700,160			0.00	\$	
4	Double Track Section - In Trench	Mile	\$	4,700,160			0.00	\$	
	Four Track Section - Total								
	Four-track Section - At Grade	Mile	\$	4,200,448			0.00	\$	
	Four-Track Section - On Structure	Mile	\$	9,400,320			0	\$	
	Four-Track Section - In Tunnel or Subway	Mile	\$	9,400,320			0	\$	
	Four-Track Section - In Trench	Mile	\$	9,400,320			0.00	\$	
	Single Track - Total								
	Single Track Section - At Grade	Mile	\$	1,549,312			0	*	
	Single Track Section - On structure	Mile	\$	2,350,080			0	Ψ.	
	Single Track Section - In Tunnel or Subway	Mile	\$	2,350,080			0	*	
3	Single Track Section - In Trench	Mile	\$	2,350,080			0	\$	
I									
	Freight Double Track - At Grade	Mile	\$	2,839,552			0	\$	
)	Freight Single Track - At Grade	Mile	\$	1,549,312			0	\$	
	Earthwork Items								
1	Site Preparation - Undeveloped	Acre	\$	9,216			32.98	\$	303,92
2	Total Cut	CY	\$	6.00			0.00	\$	
3	Total Fill	CY	\$	6.00			0.00	\$	
4	Borrow	CY	\$	13.00			0.00	\$	
5	Spoil	CY	\$	13.00			0.00	\$	
6	Landscape erosion Control	Acre	\$	6,144			0.00	\$	
7	Security Fencing (Both sides of ROW)	Mile	\$	144,384			0.00	\$	
	Special Drainage Facilities	5% Earl	hwor	rk				\$	15,19
	Structures, Tunnels, Walls								
1	Standard Structure (2 tracks)	Mile	\$	34,972,672			0.00	\$	
2	High Structure	Mile	\$	40,424,448				\$	
3	Long Span Structure	Mile	\$	61,919,232				\$	
4	Waterway Crossing - Primary	Mile	\$	85,342,208				\$	
5	Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$	92,049,408			0.02	\$	1,743,36
	Twin Single Track Drill&Blast (<6 Miles)	Mile		142,731,264				\$	
7	Twin Single Track TBM (<6 Miles)	Mile	\$ 1	106,637,312				\$	
	Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile		176,720,896				\$	
	Double Track Drill & Blast	Mile		146,887,680			0.00	\$	
	Double Track Mined (Soft Soil)	Mile		79,200,000				\$	
	Double Track TBM (<6 Miles)	Mile		106,637,312				\$	
	Double Track TBM w/3rd Tube (>6 Miles)	Mile		176,720,896				\$	
	Seismic Chamber (Drill & Blast/Mined)	ea		126,205,952				\$	
	Crossovers	ea	\$	442,368				\$	
	Cut & Cover Double Track Tunnel	Mile		131,246,080			0.00		
	Trench Long (2 tracks) (1000 + ft)	Mile		57,524,224			0.00		
	Trench Long (4 tracks) (1000 + ft)	Mile		86,286,336					
	Trench Short (2 tracks) (<1000 ft)	Mile		78,843,904				\$	
	Trench Short (4 tracks) (<1000 ft)	Mile		118,265,856					
	Mechanical & Electrical for Tunnels	Mile		11,848,704				\$	
	Retaining Walls	Mile	\$	8,613,888			0.00	\$	
3	Containment Walls	Mile	\$	5,907,456				\$	
	Single Track Cut and Cover Subway	Mile		131,246,080				\$	
	Four Track Drill & Blast	Mile		293,775,360				\$	
	Four Track Mined (Soft Soil)	Mile		158,400,000				\$	
	Four Track TBM (<6 Miles)	Mile		213,274,624				\$	
	Four Track TBM w/3rd Tube (>6 Miles)	Mile		353,441,792				\$	
	Four Track Cut & Cover Tunnel	Mile		262,492,160			0.00		
Į			-	,,			2.00		
	Grade Separations								
	Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$	13,284,352				\$	
	Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea		19,926,528				\$	
	Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$	2,759,680				\$	
	Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$	2,029,568				\$	
	Roadway Crossing HSR - 2 Lane Roadway Order 2 Tracks (Urban)	ea	\$	3,563,520			0	\$	
							U		
	Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$	3,593,216			_	\$	
	Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$	2,850,816			0	\$	
	Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$	3,171,328				\$	
,,	Street Bridging HSR Trench	ea	\$	1,398,784	l			\$	
7	Sueer Buddillo HSK TIEUCI	ı ea	۱ ۵	1,398,784	l			Þ	

COST ELEMENTS	l	UNIT	UN	IT PRICE		At-	Grade		
Subsection 2			Ba	ise: 2009		1	Α		
			(3rc	d Quarter)	Start: 450 + 00	End: 671 + 00	4.19	Mile	5
Subsection Details							Quant.		Cost
Double Track At-Grade (Mile)					Start: 450 + 00	End: 671 + 00	4.19 Miles		
Double Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		
Double Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		
Double Track Trench (Mile)					Start: 0 + 00	End. 0 . 00	0.00 Miles		
Four Track Construction/Reconstruction At-Grade (Mile) Four Track Elevated (Mile)					Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		
Four Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		
Four Track Turner (Mile)					Start: 0 + 00		0.00 Miles		
our frack french (wine)					Start. 0 + 00		0.00 Willes		
Building Items									
1 Intermediate Passenger Stations		Each	\$	-				\$	-
2 Terminal Passenger Stations		Each	\$	-				\$	-
Caltrain Passenger Station - At-Grade		Each		15,000,000			1	\$	15,000,000
Caltrain Passenger Station - On Structure		Each		15,000,000				\$	-
Caltrain Passenger Station - In Tunnel or Subway		Each		15,000,000				\$	-
Caltrain Passenger Station - In Trench		Each		15,000,000				\$	-
3 Maintenance Facility 4 Parking - Structures		Each		23,921,884				\$	-
4 Parking - Structures 5 Parking - At Grade		space space	\$ \$	-				\$	-
5 Paiking - At Grade	3	space	Þ	-				Þ	-
Rail & Utility Relocation									
1 Single Track Relocation (Temporary)	l N	Иile	\$	2,000,896				\$	-
2 Single Track Relocation (Permanent)		Иile	\$	2,000,896				\$	-
3 Single Track Removal		Иile	\$	130,048				\$	-
4 Major Utility Relocations - Dense Urban	N	∕lile	\$	1,548,288				\$	-
5 Major Utility Relocations - Urban	N	Иile	\$	1,084,416				\$	-
6 Major Utility Relocations - Dense Suburban	N	Иile	\$	775,168				\$	-
7 Major Utility Relocations - Suburban	N	Иile	\$	464,896				\$	-
8 Major Utility Relocations - Undeveloped	N	∕lile	\$	30,720				\$	-
ROW (Not Included)									
ROW required for each segment				0.707.004					
1 Dense Urban		Acre	\$	2,786,321				\$	-
2 Urban 3 Dense Suburban		Acre Acre	\$	1,371,510 908,134				\$	-
4 Suburban		Acre	\$	208,418				\$	-
5 Undeveloped		Acre	\$	3,642				\$	-
ROW required for Temp. Construction Easement		1010	Ψ	3,042				Ψ	_
1 Dense Urban	Δ	Acre						\$	
2 Urban		Acre						\$	_
3 Dense Suburban		Acre						\$	
4 Suburban		Acre						\$	
5 Undeveloped	Д	Acre						\$	-
Right-of-Way Required for Stations, Maintenance & Parking Facilities									
6 Dense Urban	A	Acre		2,786,321				\$	-
7 Urban	A			1,371,510				\$	-
8 Dense Suburban	Α	Acre	\$	908,134				\$	-
9 Suburban		Acre	\$	208,418				\$	-
10 Undeveloped	Α	Acre	\$	3,642				\$	
Environmental Mitigation = 3% Line Costs								\$	775,596
System Floments									
System Elements 1 Signaling (ATC)		Иile	\$	2,070,000			4.19	¢	8,664,205
2 Communications (w/ Fiber Optic Backbone)		viile Viile	\$	540,000			4.19		2,260,227
3 Wayside Protection System		viile Viile	\$	108.000			4.19		452,045
- Traisias Froisian System	"		Ψ	100,000			7.17	Ψ	102,040
Electrification Items									
1 Traction Power supply	N	Лile	\$	1,170,000			4.19	\$	4,897,159
2 Traction Power Distribution	N.	∕lile	\$	1,485,000			4.19		6,215,625
S	Subtotal							\$	49,118,044
Program Implementation Costs (per screening)								\$	12,525,101
Program Implementation Costs									
0 11 1 / 1 / 2 / 2 / 2 / 2 / 2 / 2 / 2 /								_	10.075 -:
Contingencies (per screening) (25%)								\$	12,279,511
Cultitatal						<u> </u>		_	70.000 :-
Subtotal								\$	73,922,656

Subtotal (Rounded) \$ 74,000,000



COST ELEMENTS	UNIT	UNIT PRICE			rm	
ubsection 2		Base: 2009	Start: 671 + 00	End: 724 + 00	3 1.00 N	Milos
		(3rd Quarter)	Start. 671 + 00	E110. 724 + 00	1.00 N	illes
bsection Details					Quant.	Cost
puble Track At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles	
puble Track Elevated (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles	
ouble Track Tunnel (Mile) ouble Track Trench (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	
ur Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles	
ur Track Elevated (Mile)			Start: 671 + 00	End: 724 + 00	1.00 Miles	
ur Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles	
ur Track Trench (Mile)			Start: 0 + 00		0.00 Miles	
Double Track Section - Total					0.00	•
1 Double Track Section - At Grade 2 Double Track Section - On Structure	Mile Mile	\$ 2,100,224 \$ 4,700,160			0.00 0.00	
3 Double Track Section - In Tunnel or Subway	Mile	\$ 4,700,160			0.00	
4 Double Track Section - In Trench	Mile	\$ 4,700,160			0.00	
Four Track Section - Total	l					
Four-track Section - At Grade	Mile	\$ 4,200,448			0.50	
Four-Track Section - On Structure Four-Track Section - In Tunnel or Subway	Mile Mile	\$ 9,400,320 \$ 9,400,320			0.50 0.00	
Four-Track Section - In Trumer of Subway	Mile	\$ 9,400,320			0.00	
Tour Hadic Scotlon III Honor	IVIIIC	Ψ 7,100,020			0.00	Ψ
Single Track - Total						
5 Single Track Section - At Grade	Mile	\$ 1,549,312			0.00	
Single Track Section - On structure	Mile	\$ 2,350,080			0.00	
7 Single Track Section - In Tunnel or Subway	Mile	\$ 2,350,080			0.00	
B Single Track Section - In Trench	Mile	\$ 2,350,080			0.00	>
Freight Double Track - At Grade	Mile	\$ 2,839,552			0.00	\$
Freight Single Track - At Grade	Mile	\$ 1,549,312			0.00	
Earthwork Items						
Site Preparation - Undeveloped	Acre	\$ 9,216			13.38	
2 Total Cut	CY	\$ 6.00			0.00	
B Total Fill 4 Borrow	CY	\$ 6.00 \$ 13.00			196296.30 196296.30	
4 Borrow 5 Spoil	CY	\$ 13.00 \$ 13.00			0.00	
Landscape erosion Control	Acre	\$ 6,144			0.00	
7 Security Fencing (Both sides of ROW)	Mile	\$ 144,384			0.00	
B Special Drainage Facilities	5% Eart	hwork				\$ 192,64
Structures, Tunnels, Walls 1 Standard Structure (2 tracks)	Mile	¢ 24.072.472			0.50	¢ 17 550 57
2 High Structure	Mile Mile	\$ 34,972,672 \$ 40,424,448			0.50	\$ 17,552,57 \$
3 Long Span Structure	Mile	\$ 61,919,232				\$
4 Waterway Crossing - Primary	Mile	\$ 85,342,208				\$
5 Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$ 92,049,408				\$
Twin Single Track Drill&Blast (<6 Miles)	Mile	\$ 142,731,264				\$
7 Twin Single Track TBM (<6 Miles)	Mile	\$ 106,637,312				\$
B Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$ 176,720,896				\$
9 Double Track Drill & Blast	Mile	\$ 146,887,680				\$
Double Track Mined (Soft Soil) Double Track TBM (<6 Miles)	Mile Mile	\$ 79,200,000 \$ 106,637,312				\$
Double Track TBM (<0 Miles) Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 176,720,896				
Seismic Chamber (Drill & Blast/Mined)	ea	\$ 176,726,676				\$
2 Crossovers	ea	\$ 442,368				\$
Cut & Cover Double Track Tunnel	Mile	\$ 131,246,080			0.00	
4 Trench Long (2 tracks) (1000 + ft)	Mile	\$ 57,524,224			0.00	\$
Trench Long (4 tracks) (1000 + ft)	Mile	\$ 86,286,336				¢
Trench Short (2 tracks) (<1000 ft) Trench Short (4 tracks) (<1000 ft)	Mile Mile	\$ 78,843,904 \$ 118,265,856				\$
Mechanical & Electrical for Tunnels	Mile	\$ 118,203,830				\$
Retaining Walls	Mile	\$ 8,613,888			0.50	\$ 4,323,25
Containment Walls	Mile	\$ 5,907,456				\$
Single Track Cut and Cover Subway	Mile	\$ 131,246,080				\$
Four Track Drill & Blast	Mile	\$ 293,775,360				\$
Four Track Mined (Soft Soil)	Mile	\$ 158,400,000				\$
Four Track TBM (<6 Miles) Four Track TBM w/3rd Tube (>6 Miles)	Mile Mile	\$ 213,274,624 \$ 353,441,792				
Four Track Cut & Cover Tunnel	Mile	\$ 262,492,160			0.00	\$
	.,,,,,,	,			5.50	
Grade Separations						
Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$ 13,284,352				\$
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$ 19,926,528				\$
Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$ 2,759,680				\$ 5,519,30
Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$ 2,029,568				\$
Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 3,563,520				\$
Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$ 3,593,216				\$ ¢
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban) Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea ea	\$ 2,850,816 \$ 3,171,328				\$ \$
ALCOGOTTON OF COSTING FIGHT & LONG INDOUNTER OVER & HIGHS (UNICACIONES)	ea.		l			
7 Street Bridging HSR Trench	ea	\$ 1,398,784				\$

COST ELEMENTS	UNIT	UNIT PRICE	Berm			
Subsection 2		Base: 2009			В	
		(3rd Quarter)	Start: 671 + 00	End: 724 + 00	1.00	Miles
Subsection Details		<u> </u>			Quant.	Cost
Double Track At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Tunnel (Mile) Double Track Trench (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile)			Start: 671 + 00	End: 724 + 00	1.00 Miles	
Four Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles	
Four Track Trench (Mile)	_	1	Start: 0 + 00		0.00 Miles	
Building Items						
1 Intermediate Passenger Stations	Each	\$ -				\$ -
2 Terminal Passenger Stations	Each	\$ -				\$ -
Caltrain Passenger Station - At-Grade	Each	\$15,000,000				\$ -
Caltrain Passenger Station - On Structure	Each	\$15,000,000				-
Caltrain Passenger Station - In Tunnel or Subway Caltrain Passenger Station - In Trench	Each Each	\$15,000,000 \$15,000,000				\$ - \$ -
3 Maintenance Facility	Each	\$ 123,921,884				\$ -
4 Parking - Structures	space	\$ -				\$ -
5 Parking - At Grade	space	\$ -				\$ -
Poil & Utility Polocation						
Rail & Utility Relocation 1 Single Track Relocation (Temporary)	Mile	\$ 2,000,896				\$ -
2 Single Track Relocation (Permanent)	Mile	\$ 2,000,896				\$ -
3 Single Track Removal	Mile	\$ 130,048				\$ -
4 Major Utility Relocations - Dense Urban	Mile	\$ 1,548,288				\$ -
5 Major Utility Relocations - Urban	Mile	\$ 1,084,416				-
6 Major Utility Relocations - Dense Suburban 7 Major Utility Relocations - Suburban	Mile Mile	\$ 775,168 \$ 464,896				\$ - \$ -
8 Major Utility Relocations - Subulban 8 Major Utility Relocations - Undeveloped	Mile	\$ 404,696				\$ -
Sings only research one characters		00/120				Ť
ROW (Not Included)						
ROW required for each segment		A 0.70/ 004				*
1 Dense Urban 2 Urban	Acre Acre	\$ 2,786,321 \$ 1,371,510				\$ - \$ -
3 Dense Suburban	Acre	\$ 908,134				\$ -
4 Suburban	Acre	\$ 208,418				\$ -
5 Undeveloped	Acre	\$ 3,642				\$ -
ROW required for Temp. Construction Easement	١.					
1 Dense Urban 2 Urban	Acre Acre					\$ - \$ -
3 Dense Suburban	Acre					\$ -
4 Suburban	Acre					\$ -
5 Undeveloped	Acre					\$ -
Right-of-Way Required for Stations, Maintenance & Parking Facilities	1.					
6 Dense Urban	Acre	\$ 2,786,321 \$ 1,371,510				-
7 Urban 8 Dense Suburban	Acre Acre	\$ 1,371,510 \$ 908,134				\$
9 Suburban	Acre	\$ 208,418				\$ -
10 Undeveloped	Acre	\$ 3,642				\$ -
Environmental Mitigation = 3% Line Costs						\$ 1,148,009
System Elements						
1 Signaling (ATC)	Mile	\$ 2,070,000			1.00	\$ 2,077,841
2 Communications (w/ Fiber Optic Backbone)	Mile	\$ 540,000			1.00	
3 Wayside Protection System	Mile	\$ 108,000			1.00	\$ 108,409
Electrification Items						
1 Traction Power supply	Mile	\$ 117,000			1.00	\$ 117,443
2 Traction Power Distribution	Mile	\$ 1,485,000			1.00	
Subtota	I					\$ 43,751,330
Program Implementation Costs (per screening)	1					\$ 11,156,589
Program Implementation Costs						
Contingencies (per screening) (25%)						\$ 10,937,832
Continguities (per servering) (2070)						ψ 10,737,032
Subtotal		•	1			\$ 65,845,751
Subtotal (Rounded)						\$ 66,000,000

Subtotal (Rounded) \$ 66,000,000



COST ELEMENTS	UNIT UNIT PRICE			erm				e (2 Tracks)				(3 Tracks)			aduct (2 Tracks)	
Subsection 2	Base: 2009 (3rd	Ctart. 724 - 00		C1		Ctort. 77F : 00		C2	Mileo	Ctort. 775 . 00		C2	_	ļ	C2	Mileo
	Quarter)	Start: 724 + 00	End: 775 + 00	0.97 Miles	5	Start: 775 + 00	End: 843 + 00	1.29	Miles	Start: 775 + 00	End: 843 + 00	1.29 Mile:	5	Start: 775 + 00 End: 843 + 00	1.29 N	vines
Subsection Details				Quant.	Cost			Quant.	Cost			Quant.	Cost		Quant.	Cost
Double Track At-Grade (Mile) (Three track where noted) Double Track Elevated (Mile)		Start: 0 + 00 Start: 724 + 00	End: 0 + 00 End: 775 + 00	0.00 Miles 0.97 Miles		Start: 775 + 00 Start: 0 + 00	End: 843 + 00	1.29 Miles 0.00 Miles		Start: 775 + 00 Start: 0 + 00	End: 843 + 00	1.29 Miles 0.00 Miles		Start: 0 + 00 End: 0 + 00 Start: 775 + 00 End: 843 + 00	0.00 Miles 1.29 Miles	
Double Track Tunnel (Mile)		Start: 0 + 00	E11d: 773 1 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles	
Double Track Trench (Mile)		Start: 0 + 00	5 1 2 22	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile) Four Track Elevated (Mile)		Start: 0 + 00 Start: 0 + 00	End: 0 + 00 End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 End: 0 + 00 Start: 0 + 00 End: 0 + 00	0.00 Miles 0.00 Miles	
Four Track Tunnel (Mile)		Start: 0 + 00	Elia. 0 1 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles	
Four Track Trench (Mile)		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles	
Single Track At-Grade (Mile) Single Track Elevated (Mile)		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	0.00 Miles 0.00 Miles	
Single Track Tunnel (Mile)		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles	
Single Track Trench (Mile)		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles	
Double Track Section - Total 1 Double Track Section - At Grade	Mile \$ 2,100,224			0.00 \$	_			1.29	\$ 2,704,834			0.00 \$	_		0.00 \$	\$
2 Double Track Section - On Structure	Mile \$ 4,700,160			0.97 \$	4,539,927			0.00				0.00 \$	-		1.29 \$	\$ 6,053,236
3 Double Track Section - In Tunnel or Subway	Mile \$ 4,700,160			0.00 \$	-			0.00	-			0.00 \$	-		0.00 \$	
4 Double Track Section - In Trench	Mile \$ 4,700,160			0.00 \$	=			0.00	-			0.00 \$	-		0.00 \$	>
Three Track Section - Total (See note)																
Three-track Section - At Grade	Mile \$ 3,150,336			0.00 \$	-			0.00	-			1.29 \$	4,057,251		0.00 \$	
Three-Track Section - On Structure Three-Track Section - In Tunnel or Subway	Mile \$ 7,050,240 Mile \$ 7,050,240			0.00 \$ 0.00 \$	-			0.00 0.00	\$ - \$ -			0.00 \$ 0.00 \$	-		0.00 \$	
Three-Track Section - In Trench	Mile \$ 7,050,240			0.00 \$	-			0.00	\$ -			0.00 \$	=		0.00	
Four Track Section - Total Four-track Section - At Grade	Mile \$ 4,200,448			0.00 \$	-			0.00	\$ -			0.00 \$	-		0.00 \$	\$ -
Four-Track Section - On Structure	Mile \$ 9,400,320			0.00 \$	-			0.00	\$ -			0.00 \$	-		0.00 \$	
Four-Track Section - In Tunnel or Subway	Mile \$ 9,400,320			0.00 \$	-			0.00	-			0.00 \$	-		0.00 \$	
Four-Track Section - In Trench	Mile \$ 9,400,320			0.00 \$	-			0.00	-			0.00 \$	-		0.00 \$	> -
Single Track - Total																
5 Single Track Section - At Grade	Mile \$ 1,549,312			0.00 \$	-			0.00	\$ -			0.00 \$	-		0.00 \$	
6 Single Track Section - On structure 7 Single Track Section - In Tunnel or Subway	Mile \$ 2,350,080 Mile \$ 2,350,080			0.00 \$ 0.00 \$	-			0.00 0.00	\$ -			0.00 \$ 0.00 \$	-		0.00 \$	
8 Single Track Section - In Turnier of Subway	Mile \$ 2,350,080			0.00 \$	-			0.00	\$ -			0.00 \$	-		0.00 \$	
9 Freight Double Track - At Grade 10 Freight Single Track - At Grade	Mile \$ 2,839,552 Mile \$ 1,549,312			0.00 \$ 0.00 \$	-			0.00 0.00				0.00 \$ 0.00 \$	-		0.00 \$	
To Freight Single Hack - At Grade	Wille \$ 1,549,512			0.00 \$	-			0.00	-			0.00 \$	-		0.00 3	-
Earthwork Items																
1 Site Preparation - Undeveloped 2 Total Cut	Acre \$ 9,216 CY \$ 6.00			7.61 \$ 0.00 \$	70,136			10.15 0.00	\$ 93,514			10.15 \$ 0.00 \$	93,514		10.15 \$ 0.00 \$	
3 Total Fill	CY \$ 6.00			0.00 \$	-			0.00	\$ -			0.00 \$	-		0.00	
4 Borrow	CY \$ 13.00			0.00 \$	-			0.00				0.00 \$	-		0.00 \$	\$ -
5 Spoil	CY \$ 13.00 Acre \$ 6,144			0.00 \$ 0.00 \$	-			0.00	\$ -			0.00 \$ 0.00 \$	-		0.00 \$	
6 Landscape erosion Control 7 Security Fencing (Both sides of ROW)	Acre \$ 6,144 Mile \$ 144,384			0.00 \$	-			0.00 0.00	\$ -			0.00 \$	-		0.00 \$	
8 Special Drainage Facilities	5% Earthwork			\$	3,507				\$ 4,676			\$	4,676		\$	\$ 4,676
Structures, Tunnels, Walls																
1 Standard Structure (2 tracks)	Mile \$ 34,972,672			\$	-			0.00	\$ -			0.00 \$	-		1.29 \$	\$ 45,040,562
Standard Structure (3 tracks)	Mile \$ 52,459,008								_							_
2 High Structure 3 Long Span Structure	Mile \$ 40,424,448 Mile \$ 61,919,232			\$	-				\$ - \$ -			\$	-			\$ - \$.
4 Waterway Crossing - Primary	Mile \$ 85,342,208			\$	-				\$ -			\$	-			\$ -
5 Waterway Crossing - Secondary (Irrigation Canal)	Mile \$ 92,049,408			\$	-				-			\$	-			\$ -
6 Twin Single Track Drill&Blast (<6 Miles) 7 Twin Single Track TBM (<6 Miles)	Mile \$ 142,731,264 Mile \$ 106,637,312			\$	-				\$ - \$			\$	-		\$	\$
8 Twin Single Track TBM (<6 Miles)	Mile \$ 106,637,312			\$	-				\$ -			\$	-		3	\$
9 Double Track Drill & Blast	Mile \$ 146,887,680			0.00 \$	-			0.00	\$ -			0.00 \$	-		0.00	\$
10 Double Track Mined (Soft Soil)	Mile \$ 79,200,000			\$	-				-			\$	-			\$
Double Track TBM (<6 Miles) Double Track TBM w/3rd Tube (>6 Miles)	Mile \$ 106,637,312 Mile \$ 176,720,896															
11 Seismic Chamber (Drill & Blast/Mined)	ea \$ 126,205,952			\$	-				\$ -			\$	-			\$ -
12 Crossovers	ea \$ 442,368			\$	-				-			\$	-			\$ -
13 Cut & Cover Double Track Tunnel 14 Trench Long (2 tracks) (1000 + ft)	Mile \$ 131,246,080 Mile \$ 57,524,224			0.00 \$ 0.00 \$	-			0.00 0.00	\$ -			0.00 \$ 0.00 \$	-		0.00 \$	
Trench Long (4 tracks) (1000 + ft) Trench Long (4 tracks) (1000 + ft)	Mile \$ 57,524,224 Mile \$ 86,286,336			0.00 \$	-			0.00	φ -			0.00 \$	-		0.00	<i>p</i>
Trench Long (1 track) (1000 + ft)	Mile \$ 40,266,957															
15 Trench Short (2 tracks) (<1000 ft) Trench Short (4 tracks) (<1000 ft)	Mile \$ 78,843,904			\$	-				-			\$	-		\$	\$
Trench Short (4 tracks) (<1000 ft) 16 Mechanical & Electrical for Tunnels	Mile \$ 118,265,856 Mile \$ 11,848,704			s	-				\$ -			\$	-			\$
17 Retaining Walls	Mile \$ 8,613,888			0.97 \$	8,320,233			0.00	\$ -			0.00 \$	-		0.00	\$
18 Containment Walls	Mile \$ 5,907,456			\$	-				-			\$	-		\$	\$
19 Single Track Cut and Cover Subway	Mile \$ 131,246,080			\$	-				\$ -			\$	-			\$
Four Track Drill & Blast Four Track Mined (Soft Soil)	Mile \$ 293,775,360 Mile \$ 158,400,000			\$	-				\$ -			\$	-		3	\$
Four Track TBM (<6 Miles)	Mile \$ 213,274,624								•							•
Four Track Cut & Court Types	Mile \$ 353,441,792			0.00				2.00	¢			0.00				¢.
Four Track Cut & Cover Tunnel	Mile \$ 262,492,160			0.00 \$	-			0.00	-			0.00 \$	-		0.00 \$	5
Grade Separations																
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea \$ 13,284,352			\$	-				\$ -			\$	-		\$	\$ -

COST ELEMENTS	UNIT	UNIT PRICE		Е	Berm			At-Grad	e (2 Tracks)			At-Grad	e (3 Tracks)			Elevated Via	duct (2 Tracks)	
Subsection 2		Base: 2009 (3rd			C1				C2				C2			(C2	
		Quarter)	Start: 724 + 00	End: 775 + 00	0.97	7 Miles	Start: 775 + 00	End: 843 + 00	1.29 Mi	les	Start: 775 + 00	End: 843 + 00	1.29	Miles	Start: 775 + 00	End: 843 + 00	1.29 Mi	les
Subsection Details		,			Overt	Cont			Quant.	Coot			Overt	Cost			Ougant	Coot
Double Track At-Grade (Mile) (Three track where noted)			Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost	Start: 775 + 00	End: 843 + 00	1.29 Miles	Cost	Start: 775 + 00	End: 843 + 00	Quant. 1,29 Miles	COSI	Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost
Double Track Elevated (Mile)			Start: 724 + 00	End: 775 + 00	0.97 Miles		Start: 0 + 00	E11d. 010 1 00	0.00 Miles		Start: 0 + 00	E11d. 010 1 00	0.00 Miles		Start: 775 + 00	End: 843 + 00	1.29 Miles	
Double Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00 Start: 0 + 00	End: 0 + 00 End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile) Four Track Tunnel (Mile)			Start: 0 + 00	Ena: 0 + 00	0.00 Miles 0.00 Miles	-	Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	
Four Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Single Track At-Grade (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Single Track Elevated (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Single Track Tunnel (Mile) Single Track Trench (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$ 19,926,528	Start. 0 + 00		0.00 Miles	\$ -	Start. 0 + 00		0.00 Miles	_	Start. 0 + 00		0.00 Miles	\$ -	Start. 0 + 00		0.00 Miles	_
2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$ 2,759,680				\$ -			0 \$	-			0	\$ -			\$	-
3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$ 2,029,568				\$ -			\$	-				\$ -			\$	=
4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 3,563,520				-			2 \$	7,127,040			2	\$ 7,127,040			\$	-
5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea ea	\$ 3,593,216 \$ 2,850,816				-			\$	-			0	\$ -			\$	-
6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$ 2,650,810				\$ -			\$	-			U	\$ -			\$	-
7 Street Bridging HSR Trench	ea	\$ 1,398,784				\$ -			\$	-				\$ -			\$	-
8 Minor Crossing Closures	ea	\$ 87,040				\$ -			2 \$	174,080			1	\$ 87,040			0 \$	-
				1														
Building Items	Fach	•				¢								¢			,	
1 Intermediate Passenger Stations 2 Terminal Passenger Stations	Each Each	ls -				\$ -				-				\$ -			\$	-
Caltrain Passenger Station - At-Grade	Each	\$15,000,000			1	\$ 15,000,000			0 \$	-			0	\$ -			0 \$	-
Caltrain Passenger Station - On Structure	Each	\$15,000,000				\$ -			\$	-				\$ -			\$	-
Caltrain Passenger Station - In Tunnel or Subway	Each	\$15,000,000				-			\$	-				-			\$	-
Caltrain Passenger Station - In Trench 3 Maintenance Facility	Each Each	\$15,000,000				-			\$	-				\$ -			\$	-
4 Parking - Structures	space	\$ 123,921,884				\$ -			\$	-				\$ -			\$	-
5 Parking - At Grade	space	\$ -				\$ -			\$	-				\$ -			\$	-
	'																	
Rail & Utility Relocation																		
1 Single Track Relocation (Temporary)	Mile	\$ 2,000,896				-			\$	-				\$ -			\$	-
2 Single Track Relocation (Permanent) 3 Single Track Removal	Mile Mile	\$ 2,000,896 \$ 130,048				5 -			\$	-				\$ -			\$	-
4 Major Utility Relocations - Dense Urban	Mile	\$ 1,548,288				\$ -			\$	-				\$ -			\$	=
5 Major Utility Relocations - Urban	Mile	\$ 1,084,416				\$ -			\$	-				\$ -			\$	-
6 Major Utility Relocations - Dense Suburban	Mile	\$ 775,168				\$ -			\$	-				\$ -			\$	-
7 Major Utility Relocations - Suburban	Mile	\$ 464,896				\$ -			\$	-				\$ -			\$	-
8 Major Utility Relocations - Undeveloped	Mile	\$ 30,720				\$ -			\$	-				\$ -			\$	-
ROW (Not Included)																		
ROW required for each segment																		
1 Dense Urban	Acre	\$ 2,786,321				\$ -			\$	-				\$ -			\$	-
2 Urban	Acre	\$ 1,371,510				\$ -			\$	-				\$ -			\$	-
3 Dense Suburban	Acre	\$ 908,134				-			\$	-				-			\$	-
4 Suburban 5 Undeveloped	Acre Acre	\$ 208,418 \$ 3,642				-			\$	-				-			\$	-
ROW required for Temp. Construction Easement	Acre	\$ 3,042				-			2	-				-			\$	-
1 Dense Urban	Acre					\$ -			\$	-				\$ -			\$	-
2 Urban	Acre					\$ -			\$	-				\$ -			\$	-
3 Dense Suburban	Acre					\$ -			\$	-				\$ -			\$	-
4 Suburban	Acre					\$ -			\$	-				\$ -			\$	-
5 Undeveloped Right-of-Way Required for Stations, Maintenance & Parking Facilities	Acre					\$ -			\$	-				-			\$	-
6 Dense Urban	Acre	\$ 2,786,321				\$ -			\$	-				\$ -			\$	-
7 Urban	Acre	\$ 1,371,510				\$ -			\$	-				\$ -			\$	-
8 Dense Suburban	Acre	\$ 908,134				\$ -			\$	-				\$ -			\$	-
9 Suburban	Acre	\$ 208,418				\$ -			\$	-				\$ -			\$	-
10 Undeveloped Environmental Mitigation = 3% Line Costs	Acre	\$ 3,642				\$ 838,014			\$	303,124				\$ 341,086			\$	1,535,760
E. Monnontal Mitigation - 070 Ento 003t3						550,014				505,124				÷ 341,000				1,555,760
System Elements				1														
1 Signaling (ATC)	Mile	\$ 2,070,000		1	0.97				1.29 \$	2,665,909			1.29				1.29 \$	2,665,909
2 Communications (w/ Fiber Optic Backbone)	Mile	\$ 540,000			0.97				1.29 \$	695,455			1.29				1.29 \$	695,455
3 Wayside Protection System	Mile	\$ 108,000			0.97	\$ 104,318			1.29 \$	139,091			1.29	\$ 139,091			1.29 \$	139,091
Electrification Items									[
1 Traction Power supply	Mile	\$ 1,170,000			0.97	\$ 1,130,114			1.29 \$	1,506,818			1.29	\$ 1,506,818			1.29 \$	1,506,818
2 Traction Power Distribution	Mile	\$ 1,485,000		1	0.97				1.29 \$	1,912,500			1.29				2.52 \$	3,742,200
Subtota	al					\$ 33,961,646			\$	17,327,041				\$ 18,630,379			\$	61,477,221
Program Implementation Costs (per screening)						\$ 8,660,220			\$	4,418,395				\$ 4,750,747			\$	15,676,691
Program Implementation Costs									[
Contingencies (per screening) (25%)						\$ 8,490,411			¢	4,331,760				\$ 4,657,595			\$	15,369,305
Somming riches (per servering) (2070)						Ψ 0, 170,411				7,001,100				÷ +,007,070			"	10,007,000
Subtotal				1	1	\$ 51,112,277			\$	26,077,196		•		\$ 28,038,720			\$	92,523,217
Subtotal (Paundad)						\$ 51,000,000	ı			26,000,000	ı			\$ 20,000,000	1		, , , , , , , , , , , , , , , , , , ,	02 000 000

COST ELEMENTS	UNIT	UNIT PRICE			duct (3 Tracks)			,	2 Tracks)			Berm (3					ich (1 Track)	
Subsection 2		Base: 2009 (3rd Quarter)	Start: 775 + 00		C2 1.29 N	Miles	Start: 775 + 00		1.29	Miles	Start: 775 + 00		22 1.29 Mile	es	Start: 775 + 00	End: 843 + 00	C2 1.29 M	<u>liles</u>
Subsection Details		Quarter)			Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile) (Three track where noted)			Start: 0 + 00	End: 0 + 00	0.00 Miles	0031	Start: 0 + 00	End: 0 + 00	0.00 Miles	0031	Start: 0 + 00	End: 0 + 00	0.00 Miles	0031	Start: 0 + 00	End: 0 + 00	0.00 Miles	0031
Double Track Elevated (Mile) Double Track Tunnel (Mile)			Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 775 + 00 Start: 0 + 00	End: 843 + 00	1.29 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	
Double Track Trench (Mile)			Start: 0 + 00	F:-1 0 00	0.00 Miles		Start: 0 + 00	F1 0 00	0.00 Miles		Start: 0 + 00	F. d. 0. 00	0.00 Miles		Start: 0 + 00	F1.0 00	0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile) Four Track Elevated (Mile)			Start: 0 + 00 Start: 775 + 00	End: 0 + 00 End: 843 + 00	0.00 Miles 1.29 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00 End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 775 + 00	End: 0 + 00 End: 843 + 00	0.00 Miles 1.29 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00 End: 0 + 00	0.00 Miles 0.00 Miles	
Four Track Tunnel (Mile) Four Track Trench (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00	Fnd: 0 : 00	0.00 Miles	
Single Track At-Grade (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00 End: 0 + 00	0.00 Miles 0.00 Miles	
Single Track Elevated (Mile) Single Track Tunnel (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	
Single Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 775 + 00	End: 843 + 00	1.29 Miles	
Double Track Section - Total 1 Double Track Section - At Grade	Mile	\$ 2,100,224			0.00	-			0.00	\$ -			0.00 \$	-			0.00 \$	<i>j</i> .
2 Double Track Section - On Structure	Mile	\$ 4,700,160			0.00 \$	-			1.29	\$ 6,053,236			0.00 \$	-			0.00 \$	
3 Double Track Section - In Tunnel or Subway 4 Double Track Section - In Trench	Mile Mile	\$ 4,700,160 \$ 4,700,160			0.00 \$	-			0.00				0.00 \$ 0.00 \$	-			0.00 \$ 0.00 \$	
		, , , , , , ,																
Three Track Section - Total (See note) Three-track Section - At Grade	Mile	\$ 3,150,336			0.00	-			0.00	\$ -			0.00 \$	-			0.00 \$; -
Three-Track Section - On Structure	Mile	\$ 7,050,240			1.29	9,079,855			0.00	\$ -			1.29 \$	9,079,855			0.00 \$	
Three-Track Section - In Tunnel or Subway Three-Track Section - In Trench	Mile Mile	\$ 7,050,240 \$ 7,050,240			0.00 \$	-			0.00 0.00				0.00 \$ 0.00 \$	-			0.00 \$ 0.00 \$	
Four Track Section - Total																	,	
Four-track Section - Total Four-track Section - At Grade	Mile	\$ 4,200,448			0.00	-			0.00				0.00 \$	-			0.00 \$	-
Four-Track Section - On Structure	Mile	\$ 9,400,320			0.00 \$	-			0.00	\$ -			0.00 \$	=			0.00 \$	-
Four-Track Section - In Tunnel or Subway Four-Track Section - In Trench	Mile Mile	\$ 9,400,320 \$ 9,400,320			0.00 \$ 0.00 \$	-			0.00 0.00				0.00 \$ 0.00 \$	-			0.00 \$	- ; -
Single Track - Total																		
5 Single Track Section - At Grade	Mile	\$ 1,549,312			0.00	-			0.00	\$ -			0.00 \$	-			0.00 \$	· -
6 Single Track Section - On structure	Mile Mile	\$ 2,350,080 \$ 2,350,080			0.00	-			0.00				0.00 \$	-			0.00 Miles \$	•
7 Single Track Section - In Tunnel or Subway 8 Single Track Section - In Trench	Mile	\$ 2,350,080			0.00 \$ 0.00 \$	-			0.00 0.00				0.00 \$ 0.00 \$	-			1.29 \$	3,026,618
9 Freight Double Track - At Grade	Mile	\$ 2,839,552			0.00	:			0.00	¢			0.00 \$				0 6	:
9 Freight Double Track - At Grade 10 Freight Single Track - At Grade	Mile	\$ 2,839,552 \$ 1,549,312			0.00	-			0.00				0.00 \$	-			0 \$	
Earthwork Items																		
1 Site Preparation - Undeveloped 2 Total Cut	Acre CY	\$ 9,216 \$ 6.00			17.17 \$ 0.00 \$	158,255			10.15 1385185.19				17.17 \$ 0.00 \$	158,255			10.15 \$ 0.00 \$	
3 Total Fill	CY	\$ 6.00			0.00 \$	-			503703.70	\$ 3,022,222			0.00 \$	-			0.00 \$	-
4 Borrow 5 Spoil	CY	\$ 13.00 \$ 13.00			0.00 \$	-			0.00 881481.48				0.00 \$ 0.00 \$	-			0.00 \$ 0.00 \$	
6 Landscape erosion Control	Acre	\$ 6,144			0.00	-			0.00	\$ -			0.00 \$	-			0.00 \$	-
7 Security Fencing (Both sides of ROW) 8 Special Drainage Facilities	Mile 5% Eart	\$ 144,384 hwork			0.00	- 7,913			0.00	\$ - \$ 1,144,305			0.00 \$	7,913			0.00 \$	5 4,676
	270 Euro					. 1,713				,,				1,713				1,070
Structures, Tunnels, Walls 1 Standard Structure (2 tracks)	Mile	\$ 34,972,672			0.00	-			0.00	\$ -			1.29 \$	45,040,562			0.00 \$; <u>-</u>
Standard Structure (3 tracks) 2 High Structure	Mile Mile	\$ 52,459,008 \$ 40,424,448			1.29	67,560,844				¢			•					:
3 Long Span Structure	Mile	\$ 61,919,232			3	, - } -				\$ -			\$	-			\$	- , -
4 Waterway Crossing - Primary 5 Waterway Crossing - Secondary (Irrigation Canal)	Mile Mile	\$ 85,342,208 \$ 92,049,408			9	-				\$ - \$			\$	-			\$	-
6 Twin Single Track Drill&Blast (<6 Miles)	Mile	\$ 142,731,264			3	, - } -				\$ -			\$	-			\$	- , -
7 Twin Single Track TBM (<6 Miles) 8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile Mile	\$ 106,637,312 \$ 176,720,896			\$	-				\$ - \$			\$	-			\$	-
9 Double Track Drill & Blast	Mile	\$ 146,887,680			0.00	, - } -			0.00	Ψ			0.00 \$	-			0.00 \$	- , -
10 Double Track Mined (Soft Soil) Double Track TBM (<6 Miles)	Mile Mile	\$ 79,200,000 \$ 106,637,312			\$	-				-			\$	-			\$	-
Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 176,720,896																
11 Seismic Chamber (Drill & Blast/Mined) 12 Crossovers	ea ea	\$ 126,205,952 \$ 442,368			9	-				\$ - \$			\$	-			\$	-
13 Cut & Cover Double Track Tunnel	Mile	\$ 131,246,080			0.00	-			0.00	\$ -			0.00 \$	-			0.00 \$	
14 Trench Long (2 tracks) (1000 + ft) Trench Long (4 tracks) (1000 + ft)	Mile Mile	\$ 57,524,224 \$ 86,286,336			0.00	-			0.00	-			0.00 \$	=			0.00 \$	=
Trench Long (1 track) (1000 + ft)	Mile	\$ 40,266,957								_							1.29 \$	
15 Trench Short (2 tracks) (<1000 ft) Trench Short (4 tracks) (<1000 ft)	Mile Mile	\$ 78,843,904 \$ 118,265,856			\$	-				-			\$	-			0.00 \$	-
16 Mechanical & Electrical for Tunnels	Mile	\$ 11,848,704			\$	-				\$ -			\$	-			0.00 \$	
17 Retaining Walls 18 Containment Walls	Mile Mile	\$ 8,613,888 \$ 5,907,456			0.00	-			0.00	\$ - \$ -			0.00 \$	-			0.00 \$ 0.00 \$	
19 Single Track Cut and Cover Subway	Mile	\$ 131,246,080			3	-				\$ -			\$	-			\$	-
Four Track Drill & Blast Four Track Mined (Soft Soil)	Mile Mile	\$ 293,775,360 \$ 158,400,000			3	-				\$ - \$ -			\$	-			\$	- ; -
Four Track TBM (<6 Miles)	Mile	\$ 213,274,624			,					•			*					-
Four Track TBM w/3rd Tube (>6 Miles) Four Track Cut & Cover Tunnel	Mile Mile	\$ 353,441,792 \$ 262,492,160			0.00	-			0.00	\$ -			0.00 \$	-			0.00 \$; -
	IVIIIC	¥ 202,772,100			0.00	-			0.00	*			3.00	-			0.00 \$	-
Grade Separations 1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$ 13,284,352								\$ -			\$	-			\$, -
The state of the s	1 30		i .		1,		ı l		I	•	ı I	Į	Ι*			ļ	1*	

Subsection Details Start: 775 + 00 End: 843 + 00 1.29 Miles Start: 940 End: 940 + 00 0.00 Miles Start: 940 En	COST ELEMENTS	UNIT UNIT PRICE	Elevated Viaduct (3 Tracks)			Berm (2	2 Tracks)			Berm (3 Tracks)			Open Trer	nch (1 Track)	
Second Content Seco	Subsection 2			Miles S	Start: 775 + 00			Miles	Start: 775 + 00			Miles	Start: 775 + 00		02	9 Miles
Control and Miles Recommend	Subsection Details	Quartor,	Quant	Cost			Quant	Cost			Quant	Cost			Quant	Cost
Control Cont	Double Track At-Grade (Mile) (Three track where noted)				Start: 0 + 00	End: 0 + 00		COST	Start: 0 + 00	End: 0 + 00		COST	Start: 0 + 00	End: 0 + 00		COST
Control Cont						End: 843 + 00				End: 0 + 00						
The content of the																
THE STATE OF THE S						End: 0 + 00				End: 0 + 00				End: 0 + 00		
The second control of the control of						End: 0 + 00				End: 843 + 00				End: 0 + 00		
Section Control Cont														End: 0 + 00		
Second Company Second Seco	Single Track At-Grade (Mile)															
The content	Single Track Elevated (Mile)															
Security colors 1.5														End: 8/3 ± 00		
Blanchet Control of 12 120-20			0 5	\$ -	Start. 0 + 00		0.00 miles	\$ -	Start. 0 1 00		0.00 Wiles	\$ -	Start. 773 1 00	E11a. 043 1 00	1.27 WIIC3	\$ -
Company of the Comp				-				\$ -				\$ -				\$ -
Part				-				\$ -				\$ -				\$ -
Proceedings Proceedings Procedure Process Proc				\$ -				\$ -				\$ -				\$ -
Source S	Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea \$ 2,850,816		5 -				\$ -				\$ -				\$ -
Section Sect	6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)			-				\$ -				\$ -			0	\$ -
State Application Column	8 Minor Crossing Closures		0	\$ -				\$ -				\$ -			1	\$ 87,040
Immunitarious of Control Immunitarious of Co	Dutlette of them a															
Section Company Processing States Company Processing States Company States Compan		Fach \$ -		<u>.</u> [\$ -				\$ -				s .
Comman C		Each \$ -		\$ -				\$ -				\$ -			1	\$ -
Count of Processing Section of Transit Challengy Fig. 15 15 15 15 15 15 15 1	Caltrain Passenger Station - At-Grade	Each \$15,000,000	0 !	ş - l			0	\$ -			0	\$ -				\$ -
September Continue				·				\$ - \$				\$ - \$				-
Observations solvery Part \$ 7,971,986 \$ 5 \$	Caltrain Passenger Station - In Trench			\$ -				\$ -				\$ -				\$ -
Special processor Spec				-				\$ -				\$ -				\$ -
Part March Recording March St. S				5				\$ -				\$ - \$				\$ -
Sign First Research (Femonal) Way \$ 2000.56 \$ 5 -		Space \$		-				J				· -				•
Sopy Control No. S		l I.														
3 Graph Fine Rescord 1				-				\$ -				\$ -				\$ -
Supplementation Wile				\$ -				\$ -				\$ -				\$ -
All part All principations Content State Sta	4 Major Utility Relocations - Dense Urban	Mile \$ 1,548,288		-				\$ -				\$ -				\$ -
7 Jakig Filty References - Standama	5 Major Utility Relocations - Urban			-				\$ -				\$ -				-
Support Supp	7 Major Litility Relocations - Dense Suburban			-				\$ -				\$ - \$				\$ -
Filtre properties Filt	8 Major Utility Relocations - Undeveloped			\$ -				\$ -				\$ -				\$ -
Filtre properties Filt	DOW (New Institute of)															
Interest lifes																
Southern	1 Dense Urban	Acre \$ 2,786,321		\$ -				\$ -				\$ -				\$ -
4 Subtach A Dr. 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				\$ -				\$ -				\$ -				-
Substitute Sub				5 -				\$ -				\$ -				\$ -
Does of Utaha				\$ -				\$ -				\$ -				\$ -
2 1 1 2 2 2 2 2 2 2		1.														•
Substant Arc Substant Arc Substant				\$.				\$ -				\$ -				\$ -
Surfice (Name of Parking Facilities Acre Surfice	3 Dense Suburban	Acre		\$ -				\$ -				\$ -				\$ -
Right of Vaya Required for Stations, Maintenance & Parking Facilities Acre S 2,786,231 S 5 -	4 Suburban			-				\$ -				\$ -				\$ -
6 Dieses Utahan 7 Utahan 8 Acre 8 C 2,786,327 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$		Aue		-				-				-				-
8 Dense Suburban Acre \$ 968,134 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	6 Dense Urban			\$ -				\$ -				\$ -				\$ -
Subtotal				-				\$ -				\$ -				\$ -
10 Undeveloped Acre S 3,642 S S S S S S S S S	9 Suburban			\$ -				\$ -				\$ -				\$ -
System Elements System Elements System Elements Signaling (ATC) Mile \$ 2,070,000 1.29 \$ 2,665,909 1.29 \$ 2,665,909 1.29 \$ 2,665,909 1.29 \$ 695,455 1.29 \$ 695,455 1.29 \$ 695,455 1.29 \$ 695,455 1.29 \$ 695,455 1.29 \$ 139,091 1.29	10 Undeveloped			\$ -				\$ -				\$ -				\$ -
Signaling (ATC)	Environmental Mitigation = 3% Line Costs			\$ 2,304,206				\$ 902,509				\$ 1,628,598				\$ 1,652,124
Signaling (ATC)	System Elements															
Subtotal Subtotal (Rounded) Subtotal (Rounded	1 Signaling (ATC)															
Electrification Items 1.29 1.506,818 1.29			1.29												1.29	\$ 139,091
Traction Power Supply Traction Power Distribution Traction P	Spread in total of a special s	1VIIIC \$ 100,000	1.29	170,751			1.29	ψ 137,U91			1.29	ψ 137,091				
Traction Power Distribution Subtotal Traction Power Distribution Subtotal Traction Power Distribution Subtotal Subtotal Subtotal Subtotal (Rounded) Subtotal Subtotal Subtotal Subtotal (Rounded)		.														
Program Implementation Costs (per screening) Program Implementation Costs (per screening) Program Implementation Costs (per screening) (25%) \$87,860,544 \$22,404,439 \$9,666,012 \$9,476,483 \$16,022,913 \$15,708,739 \$15,164,844 \$15,164,8															1.29	\$ 1,912,500
Program Implementation Costs (per screening)			2.52				1.29				1.29					\$ 59,469,977
Contingencies (per screening) (25%) \$ 21,965,136 \$ 9,476,483 \$ 15,708,739 \$ 14,867,494 Subtotal (Rounded) \$ 132,230,119 \$ 57,048,425 \$ 94,566,607 \$ 89,502,316 Subtotal (Rounded) \$ 132,000,000 \$ 57,000,000 \$ 95,000,000 \$ 90,000,000	Program Implementation Costs (per screening)															
Subtotal (Rounded) \$ 132,230,119 \$ 57,048,425 \$ 94,566,607 \$ 89,502,316 Subtotal (Rounded) \$ 32,000,000 \$ 57,000,000 \$ 95,000,000 \$ 90,000,000	Program Implementation Costs															
Subtotal (Rounded) \$ 132,230,119 \$ 57,048,425 \$ 94,566,607 \$ 89,502,316 Subtotal (Rounded) \$ 32,000,000 \$ 57,000,000 \$ 95,000,000 \$ 90,000,000	Contingencies (per screening) (25%)			\$ 21,965,136				\$ 9,476,483				\$ 15,708,739				\$ 14,867,494
Subtotal (Rounded) \$ 57,000,000 \$ 95,000,000 \$ 90,000,000	3,4,5,7							, , ,				,,,-				.,,
	Subtotal			\$ 132,230,119												\$ 89,502,316
	, ,			\$ 132,000,000				\$ 57,000,000			·	\$ 95,000,000				\$ 90,000,000

COST ELEMENTS	UNIT	UNIT PRICE			ch (2 Tracks)			Covered Frenc	th (1 Track) (HST only)			Covered Trenc		only)
bsection 2		Base: 2009 (3rd Quarter)	Start: 775 + 00	End: 843 + 00	C2 1.29	Miles	Start: 775 + 00	End: 843 + 00	C2 1.29 Mi	les	Start: 775 + 00	End: 843 + 00	C2	9 Miles
bsection Details		,			Quant.	Cost			Quant.	Cost			Quant.	Cost
uble Track At-Grade (Mile) (Three track where noted)			Start: 0 + 00	End: 0 + 00	0.00 Miles	0031	Start: 0 + 00	End: 0 + 00	0.00 Miles	0031	Start: 0 + 00	End: 0 + 00	0.00 Miles	0031
uble Track Elevated (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	F1 042 00	0.00 Miles	
uble Track Tunnel (Mile) uble Track Trench (Mile)			Start: 0 + 00 Start: 775 + 00	End: 843 + 00	0.00 Miles 1.29 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 775 + 00 Start: 0 + 00	End: 843 + 00	1.29 Miles 0.00 Miles	
ur Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
ur Track Elevated (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles			5 1 0 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
ur Track Tunnel (Mile) ur Track Trench (Mile)			Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00 End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00 End: 0 + 00	0.00 Miles 0.00 Miles	
ngle Track At-Grade (Mile)			Start: 0 + 00	Liid. 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	Liid. 0 + 00	0.00 Miles	
ngle Track Elevated (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
ngle Track Tunnel (Mile) ngle Track Trench (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 775 + 00	End: 843 + 00	0.00 Miles 1.29 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	
Double Track Section - Total			Start. 0 + 00		0.00 WIIC3		Start: 773 1 00	E110. 043 1 00	1.27 WIIC3		Start. 0 1 00		0.00 Miles	
Double Track Section - At Grade	Mile	\$ 2,100,224			0.00				0.00 \$	-			0.00 \$	
Double Track Section - On Structure	Mile	\$ 4,700,160			0.00				0.00 \$	-			0.00 \$	
B Double Track Section - In Tunnel or Subway Double Track Section - In Trench	Mile Mile	\$ 4,700,160 \$ 4,700,160			0.00 1.29				0.00 \$ 0.00 \$	-			1.29 \$ 0.00 \$	
Pound Hack Section III Henen	IVIIIC	Ψ 1,700,100			1.27	V 0,000,200			0.00				0.00	,
Three Track Section - Total (See note)														
Three-track Section - At Grade Three-Track Section - On Structure	Mile Mile	\$ 3,150,336 \$ 7,050,240			0.00 0.00				0.00 \$ 0.00 \$	-			0.00 \$	
Three-Track Section - In Tunnel or Subway	Mile	\$ 7,050,240			0.00				0.00 \$	-			0.00 \$	
Three-Track Section - In Trench	Mile	\$ 7,050,240			0.00				0.00 \$	-			0.00 \$	
- T 10 " T11													[
Four Track Section - Total Four-track Section - At Grade	Mile	\$ 4,200,448			0.00	•			0.00 \$				0.00 \$	ŧ
Four-Track Section - At Grade Four-Track Section - On Structure	Mile	\$ 9,400,320			0.00				0.00 \$	-			0.00 \$	
Four-Track Section - In Tunnel or Subway	Mile	\$ 9,400,320			0	\$ -			0.00 \$	-			0.00 \$	\$
Four-Track Section - In Trench	Mile	\$ 9,400,320			0.00	\$ -			0 \$	-			0 \$	\$
Single Track - Total														
Single Track Section - At Grade	Mile	\$ 1,549,312			0	\$ -			0.00 \$	-			0 \$	\$
Single Track Section - On structure	Mile	\$ 2,350,080			0				0 \$	-			0 \$	\$
Single Track Section - In Tunnel or Subway	Mile	\$ 2,350,080			0				0 \$	- 0.001			0 \$	
Single Track Section - In Trench	Mile	\$ 2,350,080			0	> -			1.29 \$	3,026,618			0 \$	>
Freight Double Track - At Grade	Mile	\$ 2,839,552			0	\$ -			0 \$	-			0 \$	\$
Freight Single Track - At Grade	Mile	\$ 1,549,312			0				0 \$	-			0 \$	
Forthweek Home														
Earthwork Items Site Preparation - Undeveloped	Acre	\$ 9,216			27.32	\$ 251,769			10.15 \$	93,514			17.17 \$	158,2
2 Total Cut	CY	\$ 6.00			0.00				0.00 \$	75,514			0.00	
Total Fill	CY	\$ 6.00			0.00	\$ -			0.00 \$	-			0.00 \$	\$
Borrow	CY	\$ 13.00			0.00				0.00 \$	-			0.00 \$	
S Spoil Landscape erosion Control	CY Acre	\$ 13.00 \$ 6.144			0.00 0.00				0.00 \$ 0.00 \$	-			0.00 \$	
Security Fencing (Both sides of ROW)	Mile	\$ 144,384			0.00				0.00 \$	-			0.00 \$	
Special Drainage Facilities	5% Ear	thwork				\$ 12,588			\$	4,676			\$	\$ 7,9
Structures Tunnels Wells														
Structures, Tunnels, Walls Standard Structure (2 tracks)	Mile	\$ 34,972,672			0.00	\$ -			0.00 \$	-			0.00 \$	\$
Standard Structure (3 tracks)	Mile	\$ 52,459,008			3.30				5.00				0.00	
2 High Structure	Mile	\$ 40,424,448				\$ -			\$	-			\$	\$
Long Span Structure	Mile Mile	\$ 61,919,232 \$ 85,342,208				\$ -			\$	-			\$	b
Materway Crossing - Primary Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$ 85,342,208 \$ 92,049,408				\$ -			\$	-			3	\$
Twin Single Track Drill&Blast (<6 Miles)	Mile	\$ 142,731,264				\$ -			\$	-				\$
Twin Single Track TBM (<6 Miles)	Mile	\$ 106,637,312				\$ -			\$	-			\$	\$
B Twin Single Track TBM w/3rd Tube (<6 Miles) Double Track Drill & Blast	Mile Mile	\$ 176,720,896 \$ 146,887,680			0.00	\$ -			0.00 \$	-			1 20 4	\$ \$ 189,173
Double Track Drill & Blast Double Track Mined (Soft Soil)	Mile	\$ 146,887,680			0.00	\$ -			0.00 \$	-			1.29 \$	p 189,1/3
Double Track TBM (<6 Miles)	Mile	\$ 106,637,312				•			"				1	
Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 176,720,896											[
Seismic Chamber (Drill & Blast/Mined)	ea	\$ 126,205,952				\$ -			\$	-				5
2 Crossovers 3 Cut & Cover Double Track Tunnel	ea Mile	\$ 442,368 \$ 131,246,080			0.00	\$			0.00 \$	-			0.00	>
Trench Long (2 tracks) (1000 + ft)	Mile	\$ 57,524,224			1.29				0.00 \$	-			0.00 \$	
Trench Long (4 tracks) (1000 + ft)	Mile	\$ 86,286,336												
Trench Long (1 track) (1000 + ft)	Mile	\$ 40,266,957				¢							,	.
Trench Short (2 tracks) (<1000 ft) Trench Short (4 tracks) (<1000 ft)	Mile Mile	\$ 78,843,904 \$ 118,265,856				> -			\$	-			\$	>
Mechanical & Electrical for Tunnels	Mile	\$ 11,848,704				\$ -			1.29 \$	15,259,695			1.29 \$	15,259
Retaining Walls	Mile	\$ 8,613,888			0.00				0.00 \$	-			0.00	
Containment Walls	Mile	\$ 5,907,456			0.00	\$ -			1 20 6	1/0.000.000				5
Single Track Cut and Cover Subway Four Track Drill & Blast	Mile Mile	\$ 131,246,080 \$ 293,775,360				\$ -			1.29 \$	169,029,042			\$	b
Four Track Mined (Soft Soil)	Mile	\$ 293,775,360 \$ 158,400,000				\$ -			\$	-			3	\$
Four Track TBM (<6 Miles)	Mile	\$ 213,274,624											"	
Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 353,441,792											[].	
Four Track Cut & Cover Tunnel	Mile	\$ 262,492,160			0.00	\$ -			0.00 \$	-			0.00 \$	\$
Grade Separations														
			i .	•				10			i i			

Marie Mari	only)
Second Column Second Colum	29 Miles
Column C	
South First North Medical Section (Section 1994) 1994	Cost
Section Company Comp	
The State Chemologies 1	
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Section Proceedings Process	
Schools Control post of viron interrupt mod of stories (final of the control post of	
	\$
Stype Track Relaction (Foreignent)	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$
ROW required for each segment	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$
6 Dense Urban	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$
8 Dense Suburban Acre S 908,134 S S S S S S S S S	\$
9 Suburban Acre S 208,418 S S S S S S S S S	\$
1 Signaling (ATC)	\$ \$ \$ 6,319,57
1 Signaling (ATC)	
1 Traction Power supply 2 Traction Power Distribution Subtotal Program Implementation Costs (per screening) Program Implementation Costs Mile Mile \$ 1,170,000 \$ 1.29 \$ 1,912,500 \$ 1.29 \$ 1.2	\$ 139,09
2 Traction Power Distribution Subtotal Program Implementation Costs (per screening) Program Implementation Costs Subtotal Program Implementation Costs Subtotal Program Implementation Costs Subtotal Subtotal Program Implementation Costs Subtotal Subtotal Subtotal Subtotal Subtotal Program Implementation Costs Subtotal	
Subtotal \$ 85,650,573 \$ 195,782,997 \$ 49,924,664 Program Implementation Costs	\$ 1,912,50 \$
	\$ 219,719,25 \$ 56,028,40
Contingencies (per screening) (25%) \$ 48,945,749	\$ 54,929,81
Subtotal \$ 128,904,112 \$ 294,653,410 Subtotal (Rounded) \$ 129,000,000 \$ 295,000,000	\$ 330,677,47 \$ 331,000,00

COST ELEMENTS	UNIT	UNIT PRICE		At-Grade (2 Tracks)			At-Grade	(3 Tracks)		(Open Trench (HS	T only) (1 Track)			Open Trench (HS	ST only) (2 Tracks	s)
Subsection 2		Base: 2009 (3rd Quarter)						[)				1				D	
			Start: 843 + 00	End: 905 + 00	1.17 M	liles	Start: 843 + 00	End: 905 + 00	1.17 Mi	les	Start: 843 + 00	End: 905 + 00	1.17 Miles		Start: 843 + 00	End: 905 + 00	1.17 !	Miles
ubsection Details ouble Track At-Grade (Mile)			Start: 843 + 00	End: 905 + 00	Quant. 1.17 Miles	Cost	Start: 843 + 00	End: 905 + 00	Quant. 1.17 Miles	Cost	Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost	Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost
ouble Track Elevated (Mile)			Start: 0 + 00	L11a. 703 + 00	0.00 Miles		Start: 0 + 00	L11a. 703 + 00	0.00 Miles		Start: 0 + 00	Liid. 0 + 00	0.00 Miles		Start: 0 + 00	Lilu. 0 + 00	0.00 Miles	
ouble Track Tunnel (Mile) ouble Track Trench (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 843 + 00	End: 905 + 00	0.00 Miles 1.17 Miles	
our Track Construction/Reconstruction At-Grade (Mile) our Track Elevated (Mile)			Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	
our Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
our Track Trench (Mile) ingle Track At-Grade (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	
ingle Track Elevated (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
ngle Track Tunnel (Mile) ngle Track Trench (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 843 + 00	End: 905 + 00	0.00 Miles 1.17 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	
Double Track Section - Total 1 Double Track Section - At Grade	Mile	\$ 2,100,224			1.17	\$ 2,466,172			0.00 \$	· -			0.00 \$	-			0.00	\$
2 Double Track Section - On Structure	Mile	\$ 4,700,160			0.00	\$ -			0.00 \$	-			0.00 \$	-			0.00	
3 Double Track Section - In Tunnel or Subway 4 Double Track Section - In Trench	Mile Mile	\$ 4,700,160 \$ 4,700,160			0.00				0.00 \$ 0.00 \$				0.00 \$ 0.00 \$	-			0.00 1.2	
Three Track Section - Total (See note)																		
Three-track Section - At Grade	Mile	\$ 3,150,336			0.00				1.17 \$				0.00 \$	-			0.00	
Three-Track Section - On Structure Three-Track Section - In Tunnel or Subway	Mile Mile	\$ 7,050,240 \$ 7,050,240			0.00				0.00 \$ 0.00 \$				0.00 \$ 0.00 \$	-			0.00	
Three-Track Section - In Trench	Mile	\$ 7,050,240			0.00				0.00 \$				0.00 \$	-			0.00	
Four Track Section - Total																		
Four-track Section - At Grade Four-Track Section - On Structure	Mile Mile	\$ 4,200,448 \$ 9,400,320			0.00	\$ - \$ -			0.00 \$	-			0.00 \$	-			0.00	\$ \$
Four-Track Section - In Tunnel or Subway	Mile	\$ 9,400,320			0	\$ -			0 \$	-			0 \$	-			0	\$
Four-Track Section - In Trench	Mile	\$ 9,400,320			0	-			0 \$	-			0.00 \$	-			0.00	a
Single Track - Total 5 Single Track Section - At Grade	Mile	\$ 1,549,312			0	¢ .			0 \$				0 \$				0	\$
6 Single Track Section - On structure	Mile	\$ 2,350,080			0	\$ -			0 \$	-			0 \$	-			0	\$
7 Single Track Section - In Tunnel or Subway 8 Single Track Section - In Trench	Mile Mile	\$ 2,350,080 \$ 2,350,080			0 :	\$ - \$ -			0 \$; - ; -			0 \$ 1.2 \$	2,759,564			0	\$ \$
9 Freight Double Track - At Grade	Mile	\$ 2,839,552			0	\$			0 6				٠					\$
0 Freight Single Track - At Grade	Mile	\$ 1,549,312			0	\$ -			0 \$	-			0 \$	-			0	\$
Earthwork Items Site Preparation - Undeveloped	Acre	\$ 9,216			9.25	\$ 85,263			15.66 \$	144,291			7.12 \$	65,587			9.25	\$ 85,26
2 Total Cut	CY	\$ 6.00			0.00	\$ -			0.00 \$	-			0.00 \$	-			0.00	\$
3 Total Fill 4 Borrow	CY CY	\$ 6.00 \$ 13.00			0.00	\$ - \$ -			0.00 \$ 0.00 \$	- -			0.00 \$ 0.00 \$	-			0.00	\$ \$
5 Spoil 6 Landscape erosion Control	CY	\$ 13.00 \$ 6,144			0.00 0.00	\$ -			0.00 \$ 0.00 \$	-			0.00 \$ 0.00 \$	-			0.00 0.00	\$
7 Security Fencing (Both sides of ROW)	Acre Mile	\$ 144,384			0.00	\$ -			0.00 \$	-			0.00 \$	-			0.00	\$
B Special Drainage Facilities	5% Eart	thwork			!	\$ 4,263			\$	7,215			\$	3,279			!	\$ 4,26
Structures, Tunnels, Walls 1 Standard Structure (2 tracks)	Mile	\$ 34,972,672			0.00	\$ -			0.00 \$; -			0.00 \$	_			0.00	\$
2 High Structure	Mile	\$ 40,424,448			0.00	\$ -			\$	-			\$	-			0.00	\$
3 Long Span Structure 4 Waterway Crossing - Primary	Mile Mile	\$ 61,919,232 \$ 85,342,208				\$ - \$ -			\$	- -			 \$ \$	-				\$
5 Waterway Crossing - Secondary (Irrigation Canal)	Mile Mile	\$ 92,049,408				\$ -			Š	-			\$	-				\$
6 Twin Single Track Drill&Blast (<6 Miles) 7 Twin Single Track TBM (<6 Miles)	Mile	\$ 142,731,264 \$ 106,637,312				\$ -			\$	-			\$	-				\$
8 Twin Single Track TBM w/3rd Tube (<6 Miles) 9 Double Track Drill & Blast	Mile Mile	\$ 176,720,896 \$ 146,887,680			0.00	\$ - \$			0.00 \$				0.00 \$	-			0.00	\$ \$
0 Double Track Mined (Soft Soil)	Mile	\$ 79,200,000			0.00	\$ -			\$	-			\$	-			0.00	\$
Double Track TBM (<6 Miles) Double Track TBM w/3rd Tube (>6 Miles)	Mile Mile	\$ 106,637,312 \$ 176,720,896																
1 Seismic Chamber (Drill & Blast/Mined) 2 Crossovers	ea	\$ 126,205,952 \$ 442,368				\$ - \$			\$	-			\$	=				\$ \$
3 Cut & Cover Double Track Tunnel	ea Mile	\$ 131,246,080			0.00				0.00 \$	-			0.00 \$	-			0.00	\$
4 Trench Long (2 tracks) (1000 + ft) Trench Long (4 tracks) (1000 + ft)	Mile Mile	\$ 57,524,224 \$ 86,286,336			0.00	-			0.00 \$	-			0.00 \$	=			1.17	\$ 67,547,38
5 Trench Short (2 tracks) (<1000 ft)	Mile	\$ 78,843,904			:	-			\$	-			\$	-				\$
Trench Short (4 tracks) (<1000 ft) 6 Mechanical & Electrical for Tunnels	Mile Mile	\$ 118,265,856 \$ 11,848,704				\$ -			\$				\$					\$
7 Retaining Walls 8 Containment Walls	Mile Mile	\$ 8,613,888 \$ 5,907,456			0.00	\$ -			0.00 \$				0.00 \$ 0.00 \$	-			0.00	\$
9 Single Track Cut and Cover Subway	Mile	\$ 131,246,080				\$ -			\$, - -			\$	-			0.00	\$
Four Track Drill & Blast Four Track Mined (Soft Soil)	Mile Mile	\$ 293,775,360 \$ 158,400,000				\$ - \$ -			\$	-			\$	-				\$ \$
Four Track TBM (<6 Miles)	Mile	\$ 213,274,624				-			ľ									•
Four Track TBM w/3rd Tube (>6 Miles) Four Track Cut & Cover Tunnel	Mile Mile	\$ 353,441,792 \$ 262,492,160			0.00	\$ -			0.00 \$	-			0.00 \$	-			0.00	\$
Grade Separations																		
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$ 13,284,352				\$ -			\$	-			\$	-				\$
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) 2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea ea	\$ 19,926,528 \$ 2,759,680				\$ - \$ -			\$				\$ \$	-				\$

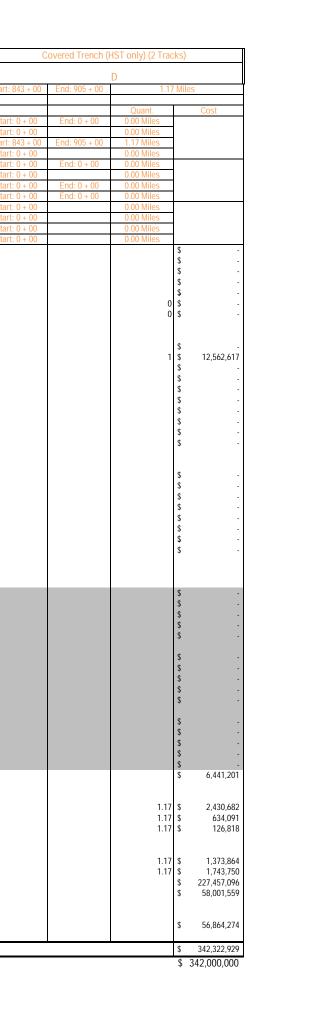
COST ELEMENTS	UNIT	UNIT PRICE		At-Grade	(2 Tracks)			At-Grade ((3 Tracks)			Open Trench (HS	ST only) (1 Track))		Open Trench (H	ST only) (2 Track	s)
Subsection 2	1	Base: 2009 (3rd Quarter)		-))			-	D				D	
		Qual (el)	Start: 843 + 00	End: 905 + 00		Miles	Start: 843 + 00		1.17 M	Miles	Start: 843 + 00	End: 905 + 00	1.17	Miles	Start: 843 + 00	End: 905 + 00		Miles
Subsection Details					Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile) Double Track Elevated (Mile)			Start: 843 + 00 Start: 0 + 00	End: 905 + 00	1.17 Miles 0.00 Miles		Start: 843 + 00 Start: 0 + 00	End: 905 + 00	1.17 Miles 0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile) Double Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	
Double Track Trench (Mile) Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 843 + 00 Start: 0 + 00	End: 905 + 00 End: 0 + 00	1.17 Miles 0.00 Miles	
Four Track Elevated (Mile)			Start: 0 + 00	L11u. 0 + 00	0.00 Miles		Start: 0 + 00	L11u. 0 + 00	0.00 Miles		Start: 0 + 00	Eliu. 0 + 00	0.00 Miles		Start: 0 + 00	EIIU. 0 + 00	0.00 Miles	
Four Track Tunnel (Mile) Four Track Trench (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	_	Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	
Single Track At-Grade (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End. 0 1 00	0.00 Miles		Start: 0 + 00	End. 0 1 00	0.00 Miles	
Single Track Elevated (Mile) Single Track Tunnel (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	
Single Track Trench (Mile)	1 14	0.000.5/0	Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	_	Start: 843 + 00	End: 905 + 00	1.17 Miles		Start: 0 + 00		0.00 Miles	
Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea \$	2,029,568 3,563,520			0	\$ -			0	\$ - \$ -				\$ -				\$ - \$ -
5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea \$	3,593,216				\$ -				\$ -				\$ -				\$ -
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban) 6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea \$	2,850,816 3,171,328				\$ -				\$ -				\$ -				\$ -
7 Street Bridging HSR Trench	ea \$	1,398,784				\$ -			4	\$ -			0	\$ -			0	\$ -
8 Minor Crossing Closures	ea \$	87,040			1	\$ 87,040			1	\$ 87,040			1	\$ 87,040			1	\$ 87,040
Building Items	Fach de									¢				¢				¢
Intermediate Passenger Stations Intermediate Passenger Stations (Millbrae)	Each \$	\$12,562,617			C	\$ -			0.5	\$ 6,281,309			0.5	\$ - 5 \$ 6,281,309			1	\$ \$ 12,562,617
2 Terminal Passenger Stations	Each \$	÷15 000 000				\$ -			0.5	\$ -				\$ -				\$ -
Caltrain Passenger Station - At-Grade Caltrain Passenger Station - On Structure	Each Each	\$15,000,000 \$15,000,000				\$ -			0.5	\$ 7,500,000 \$ -				\$ -				\$ -
Caltrain Passenger Station - In Tunnel or Subway Caltrain Passenger Station - In Trench	Each	\$15,000,000 \$15,000,000				\$ -				\$ -				\$ -				\$ -
Caltrain Passenger Station - In Trench 3 Maintenance Facility	Each \$	\$15,000,000 5 123,921,884				\$ -				\$ -				\$ -				\$ -
4 Parking - Structures	space \$	-				\$ -				\$ -				\$ -				\$ -
5 Parking - At Grade	space \$	-				\$ -				\$ -				\$ -				\$ -
Rail & Utility Relocation	AAII- Č	2 000 007								*				*				•
Single Track Relocation (Temporary) Single Track Relocation (Permanent)	Mile \$	2,000,896 2,000,896				\$ -				\$ -				\$ -				\$ -
3 Single Track Removal	Mile \$	130,048				\$ -				\$ -				\$ -				\$ -
4 Major Utility Relocations - Dense Urban 5 Major Utility Relocations - Urban	Mile \$	1,548,288 1,084,416				\$ -				\$ - \$ -				\$ -				\$ -
6 Major Utility Relocations - Dense Suburban	Mile \$	775,168				\$ -				\$ -				\$ -				\$ -
7 Major Utility Relocations - Suburban 8 Major Utility Relocations - Undeveloped	Mile \$	464,896 30,720				\$ - \$ -				\$ - \$ -				\$ -				\$ -
ROW (Not Included) ROW required for each segment																		
1 Dense Urban	Acre \$	2,786,321				\$ -				\$ -				\$ -				\$ -
2 Urban 3 Dense Suburban	Acre \$	1,371,510 908,134				\$ -				\$ -				\$ -				\$ -
4 Suburban	Acre \$	208,418				\$ -				\$ -				\$ -				\$ -
5 Undeveloped ROW required for Temp. Construction Easement	Acre \$	3,642				5 -				2 -				\$ -				-
1 Dense Urban	Acre					\$ -				\$ -				\$ -				\$ -
2 Urban 3 Dense Suburban	Acre Acre					\$ -				\$ -				\$ -				\$ -
4 Suburban	Acre					\$ -				\$ -				\$ -				\$ -
5 Undeveloped Right-of-Way Required for Stations, Maintenance & Parking Facilities	Acre					2 -				2 -				•				-
6 Dense Urban	Acre \$	2,786,321				\$ -				\$ -				\$ -				\$ -
7 Urban 8 Dense Suburban	Acre \$	1,371,510 908,134				\$ -				\$ -				\$ -				\$ -
9 Suburban	Acre \$	208,418				\$ -				\$ -				\$ -				\$ -
10 Undeveloped Environmental Mitigation = 3% Line Costs	Acre \$	3,642				\$ 79,282				\$ 531,573				\$ 275,903				\$ 2,574,171
System Elements 1 Signaling (ATC)	Mile \$	2,070,000			1.17	\$ 2,430,682			1.17				1.17	\$ 2,430,682			1.17	\$ 2,430,682
2 Communications (w/ Fiber Optic Backbone)	Mile \$	540,000			1.17	\$ 634,091			1.17	\$ 634,091			1.17 1.17	\$ 634,091			1.17	\$ 634,091
3 Wayside Protection System	Mile \$	108,000			1.17	\$ 126,818			1.17	\$ 126,818			1.17	\$ 126,818			1.17	\$ 126,818
Electrification Items	Mila d	1 170 000			1 17	¢ 1272.0/4			1 17	¢ 12720/4			1 17	t 1 272 0/4			1 17	¢ 1272.044
1 Traction Power supply 2 Traction Power Distribution	Mile \$	1,170,000 1,485,000			1.17 1.17				1.17 1.17					1,373,864 1,743,750			1.17 1.17	
						\$ 9,031,225				\$ 24,559,890				\$ 15,781,886				\$ 94,689,070
Program Implementation Costs (per screening) Program Implementation Costs						\$ 2,302,962				\$ 6,262,772				\$ 4,024,381				\$ 24,145,713
						¢ 225700/				¢ 4120.072				¢ 2045 470				¢ 22 472 2/7
Contingencies (per screening) (25%)						\$ 2,257,806				\$ 6,139,973				\$ 3,945,472				\$ 23,672,267
Subtotal						\$ 13,591,993		·		\$ 36,962,635				\$ 23,751,739				\$ 142,507,050
Subtotal (Rounded) Note: unit price for three track is interpolated from double and four tracks						\$ 14,000,000		<u></u>		\$ 37,000,000				\$ 24,000,000				\$ 143,000,000

COST ELEMENTS	UNIT	UNIT PRICE	(Covered Trench ((HST only) (1 Trac	ck)	C	Covered Trench (HST only) (2 Trac	ks)
Subsection 2		Base: 2009 (3rd Quarter)			D				D	
			Start: 843 + 00	End: 905 + 00	1.17	Miles	Start: 843 + 00	End: 905 + 00	1.17	Miles
Subsection Details Double Track At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost	Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost
Double Track Elevated (Mile) Double Track Tunnel (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 843 + 00	End: 905 + 00	0.00 Miles	
Double Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile) Four Track Elevated (Mile)			Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	
Four Track Tunnel (Mile) Four Track Trench (Mile)			Start: 0 + 00 Start: 0 + 00	End: 0 + 00 End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00 End: 0 + 00	0.00 Miles 0.00 Miles	
Single Track At-Grade (Mile)			Start: 0 + 00	End. 0 1 00	0.00 Miles		Start: 0 + 00	Elia. 0 1 00	0.00 Miles	
Single Track Elevated (Mile) Single Track Tunnel (Mile)			Start: 0 + 00 Start: 843 + 00	End: 905 + 00	0.00 Miles 1.17 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	
Single Track Trench (Mile) Double Track Section - Total			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
1 Double Track Section - At Grade 2 Double Track Section - On Structure	Mile Mile	\$ 2,100,224 \$ 4,700,160			0.00 0.00				0.00 0.00	
3 Double Track Section - In Tunnel or Subway	Mile	\$ 4,700,160			0.00	\$ -			1.17	\$ 5,519,127
4 Double Track Section - In Trench	Mile	\$ 4,700,160			0.00	\$ -			0.00	\$ -
Three Track Section - Total (See note) Three-track Section - At Grade	Mile	\$ 3,150,336			0.00	\$ -			0.00	\$ -
Three-Track Section - On Structure	Mile Mile	\$ 7,050,240			0.00 0.00	\$ -				\$ -
Three-Track Section - In Tunnel or Subway Three-Track Section - In Trench	Mile	\$ 7,050,240 \$ 7,050,240			0.00				0.00	
Four Track Section - Total										
Four-track Section - At Grade Four-Track Section - On Structure	Mile Mile	\$ 4,200,448 \$ 9,400,320			0.00	\$ - \$ -			0.00	\$ - \$ -
Four-Track Section - In Tunnel or Subway	Mile	\$ 9,400,320			0.00	\$ -			0.00	\$ -
Four-Track Section - In Trench	Mile	\$ 9,400,320			0	2 -			0	\$ -
Single Track - Total 5 Single Track Section - At Grade	Mile	\$ 1,549,312			0	\$ -			0	\$ -
6 Single Track Section - On structure	Mile	\$ 2,350,080			0	\$ -			-	\$ -
7 Single Track Section - In Tunnel or Subway 8 Single Track Section - In Trench	Mile Mile	\$ 2,350,080 \$ 2,350,080			1.17 0				0	\$ - \$ -
9 Freight Double Track - At Grade 10 Freight Single Track - At Grade	Mile Mile	\$ 2,839,552 \$ 1,549,312			0				-	\$ - \$ -
Earthwork Items										
1 Site Preparation - Undeveloped 2 Total Cut	Acre CY	\$ 9,216 \$ 6.00			9.25 298518.52				15.66 505185.19	
3 Total Fill	CY	\$ 6.00			0.00	\$ -			0.00	\$ -
4 Borrow 5 Spoil	CY CY	\$ 13.00 \$ 13.00			0.00 298518.52				0.00 505185.19	
6 Landscape erosion Control 7 Security Fencing (Both sides of ROW)	Acre Mile	\$ 6,144 \$ 144,384			0.00 0.00				0.00 0.00	
8 Special Drainage Facilities	5% Ear					\$ 287,856				\$ 487,140
Structures, Tunnels, Walls										
1 Standard Structure (2 tracks) 2 High Structure	Mile Mile	\$ 34,972,672 \$ 40,424,448			0.00	\$ - \$ -			0.00	\$ - \$ -
3 Long Span Structure 4 Waterway Crossing - Primary	Mile Mile	\$ 61,919,232 \$ 85,342,208				\$ -				\$ -
5 Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$ 92,049,408				\$ -				\$ -
6 Twin Single Track Drill&Blast (<6 Miles) 7 Twin Single Track TBM (<6 Miles)	Mile Mile	\$ 142,731,264 \$ 106,637,312				\$ - \$ -				\$ - \$ -
8 Twin Single Track TBM w/3rd Tube (<6 Miles) 9 Double Track Drill & Blast	Mile Mile	\$ 176,720,896 \$ 146,887,680			0.00	\$ - \$ -			1.17	\$ - \$ 172,481,745
10 Double Track Mined (Soft Soil)	Mile	\$ 79,200,000			0.00	\$ -			1.17	\$ -
Double Track TBM (<6 Miles) Double Track TBM w/3rd Tube (>6 Miles)	Mile Mile	\$ 106,637,312 \$ 176,720,896								
11 Seismic Chamber (Drill & Blast/Mined) 12 Crossovers	ea ea	\$ 126,205,952 \$ 442,368				\$ - \$ -				\$ - \$ -
13 Cut & Cover Double Track Tunnel 14 Trench Long (2 tracks) (1000 + ft)	Mile	\$ 131,246,080			0.00				0.00 0.00	\$ -
Trench Long (4 tracks) (1000 + ft)	Mile Mile	\$ 57,524,224 \$ 86,286,336			0.00				0.00	φ -
15 Trench Short (2 tracks) (<1000 ft) Trench Short (4 tracks) (<1000 ft)	Mile Mile	\$ 78,843,904 \$ 118,265,856				\$ -				\$ -
16 Mechanical & Electrical for Tunnels 17 Retaining Walls	Mile Mile	\$ 11,848,704 \$ 8,613,888			1.17 0.00				1.17 0.00	
18 Containment Walls	Mile	\$ 5,907,456				\$ -				\$ -
19 Single Track Cut and Cover Subway Four Track Drill & Blast	Mile Mile	\$ 131,246,080 \$ 293,775,360			1.17	\$ 154,114,715 \$ -				\$ - \$ -
Four Track Mined (Soft Soil) Four Track TBM (<6 Miles)	Mile Mile	\$ 158,400,000 \$ 213,274,624				\$ -				\$ -
Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 353,441,792								_
Four Track Cut & Cover Tunnel	Mile	\$ 262,492,160			0.00	\$ -			0.00	\$ -
Grade Separations 1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$ 13,284,352				•				¢
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$ 19,926,528				\$ -				\$ -
2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$ 2,759,680				\$ -		l	I I	\$ -

	Covered fremen	(HST only) (2 Tracks)
Subsection 2 Base: 2009 (3rd Quarter)		D
Start: 843 + 00	00 End: 905 + 00	1.17 Miles
Subsection Details Quant. Cost		Quant. Cost
Double Track At-Grade (Mile) Start: 0 + 00 End: 0 + 00 0.00 Miles Start: 0 + 00		0.00 Miles
Double Track Elevated (Mile) Start: 0 + 00 0.00 Miles Start: 0 + 0 Double Track Tunnel (Mile) Start: 0 + 00 0.00 Miles Start: 843 +		0.00 Miles 1.17 Miles
Double Track Trench (Mile) Start: 0 + 00 0.00 Miles Start: 0 + 0		0.00 Miles
Four Track Construction/Reconstruction At-Grade (Mile) Four Track Elevated (Mile) Start: 0 + 00 Start: 0 + 00 Start: 0 + 00 Start: 0 + 00 O.00 Miles Start: 0 + 0		0.00 Miles 0.00 Miles
Four Track Tunnel (Mile) Start: 0 + 00 End: 0 + 00 0.00 Miles Start: 0 + 0		0.00 Miles
Four Track Trench (Mile) Start: 0 + 00 End: 0 + 00 0.00 Miles Start: 0 + 0 Single Track At-Grade (Mile) Start: 0 + 00 0.00 Miles Start: 0 + 0		0.00 Miles 0.00 Miles
Single Track Elevated (Mile) Start: 0 + 00 0.00 Miles Start: 0 + 0	0	0.00 Miles
Single Track Tunnel (Mile) Start: 843 + 00 End: 905 + 00 1.17 Miles Start: 0 + 0 Single Track Trench (Mile) Start: 0 + 00 0.00 Miles Start: 0 + 0		0.00 Miles 0.00 Miles
3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) ea \$ 2,029,568 \$ -		\$ -
4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban) ea \$ 3,563,520		\$ - \$ -
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban) ea \$ 2,850,816 \$ -		\$ -
6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped) ea \$ 3,171,328 \$ -		\$ -
7 Street Bridging HSR Trench ea \$ 1,398,784 0 \$ - 8 Minor Crossing Closures ea \$ 87,040 0 \$ -		0 \$ -
Building Items 1 Intermediate Passenger Stations Each \$ - \$ -		\$ -
1 Intermediate Passenger Stations (Millbrae) Each \$12,562,617 0.5 \$ 6,281,309		1 \$ 12,562,617
2 Terminal Passenger Stations Each \$ - \$ - Caltrain Passenger Station - At-Grade \$ 15,000,000 \$ \$ -		\$ - \$ -
Caltrain Passenger Station - On Structure Each \$15,000,000 \$ -		\$ -
Caltrain Passenger Station - In Tunnel or Subway Caltrain Passenger Station - In Trench Each \$15,000,000 \$ - \$ -		\$ - \$ -
3 Maintenance Facility Each \$ 123,921,884 \$ -		\$ -
4 Parking - Structures space \$ - \$ Parking - At Grade \$ - \$ \$ -		\$ - \$ -
Space \$ -		\$ -
Rail & Utility Relocation 1 Single Track Relocation (Temporary) Mile \$ 2,000,896 \$ -		\$ -
1 Single Track Relocation (Temporary) Mile \$ 2,000,896 \$ -		\$ -
3 Single Track Removal Mile \$ 130,048 \$ -		\$ -
4 Major Utility Relocations - Dense Urban Mile \$ 1,548,288 \$ - 5 Major Utility Relocations - Urban Mile \$ 1,084,416 \$ \$ -		\$ - \$ -
6 Major Utility Relocations - Dense Suburban Mile \$ 775,168 \$ -		\$ -
7 Major Utility Relocations - Suburban Mile \$ 464,896 \$ - 8 Major Utility Relocations - Undeveloped \$ Mile \$ 30,720 \$ \$ -		\$ - \$ -
		•
ROW (Not Included) ROW required for each segment		
1 Dense Urban Acre \$ 2,786,321 \$		\$ -
2 Urban Acre \$ 1,371,510 \$ - 3 Dense Suburban Acre \$ 908,134 \$ -		\$ -
4 Suburban Acre \$ 208,418 \$ -		\$ -
5 Undeveloped Acre \$ 3,642 \$ - ROW required for Temp. Construction Easement		\$ -
1 Dense Urban Acre \$ -		\$ -
2 Urban Acre \$ - 3 Dense Suburban Acre \$ -		\$ - \$ -
3 Dense Suburban Acre \$ - 4 Suburban Acre \$ - 5 - 6 - 7 - 7 - 7 - 7 - 7 - 7 - 7 - 7 - 7		\$ -
5 Undeveloped Acre \$ -		\$ -
Right-of-Way Required for Stations, Maintenance & Parking Facilities 6 Dense Urban Acre \$ 2,786,321 \$ -		\$ -
7 Urban Acre \$ 1,371,510 \$ -		\$ -
8 Dense Suburban		\$ - \$ -
10 Undeveloped Acre \$ 3,642 \$ -		\$ -
Environmental Mitigation = 3% Line Costs \$ 5,493,414		\$ 6,441,201
System Elements		447
1 Signaling (ATC) Mile \$ 2,070,000 1.17 \$ 2,430,682 2 Communications (w/ Fiber Optic Backbone) Mile \$ 540,000 1.17 \$ 634,091		1.17 \$ 2,430,682 1.17 \$ 634,091
3 Wayside Protection System Mile \$ 108,000 1.17 \$ 126,818		1.17 \$ 126,818
Electrification Items		
1 Traction Power supply Mile \$ 1,170,000 1.17 \$ 1,373,864		1.17 \$ 1,373,864
2 Traction Power Distribution Mile \$ 1,485,000 1.17 \$ 1,743,750		1.17 \$ 1,743,750
S 194,916,427 Program Implementation Costs (per screening) \$ 49,703,689		\$ 227,457,096 \$ 58,001,559
Program Implementation Costs		
Contingencies (per screening) (25%) \$ 48,729,107		\$ 56,864,274
Subtotal \$ 293,349,223 Subtotal (Rounded) \$ 293,000,000		\$ 342,322,929 \$ 342,000,000

Subtotal (Rounded)

Note: unit price for three track is interpolated from double and four tracks \$ 293,000,000



		3A (0.8 miles)			3B (1.9 miles)		3	3C & 3D (1.8 miles	s)	3E (0.5 miles)
Subsection 3	At Grade	Open Trench	Covered Trench/ Tunnel	Aerial Viaduct	Open Trench	Covered Trench/ Tunnel	Aerial Viaduct	Open Trench	Covered Trench/ Tunnel	At Grade
Capital Cost (\$2009 in Millions) does not include ROW	\$12	\$ 132	\$345	\$ 194 <u>245</u>	\$ 433	\$937	\$ 265	\$ 425 <u>405</u>	\$894	\$30
Acquisition Cost of Permanent ROW	Highest	Medium	Lowest	Medium	Medium	Lowest	Medium	Medium	Lowest	Highest
Notes:				and Burlingame	and Burlingame	Stations	2 1st 2nd 3rd 4th	1. Caltrain San Mateo	1. Caltrain San Mateo Station	1. Caltrain Hayward Park Station

COST ELEMENTS	S UNIT	T UNIT PRICE		At-Grade	e (4 tracks)			Open Tre	nch (2 tracks)			Covered Tr	rench (4 tracks)	
Subsection 3		Base: 2009	Start: 005 + 00	End: 945 + 00	0.76 N	Ailos	Start: 905 + 00	End: 945 + 00	A 0.76 Mile	ne .	Start: 905 + 00	End: 945 + 00	A 0.76 Mil	00
		(3rd Quarter)	3tart. 703 + 00	L11u. 745 + 00	0.701	//illes	3tart. 703 + 00	L110. 745 + 00	0.76 (VIII)	5 3	Start. 705 + 00	L110. 745 + 00	0.76 Will	c 3
Subsection Details Double Track At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost	Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost	Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost
Double Track Elevated (Mile)			Start: 0 + 00	L11u. 0 + 00	0.00 Miles		Start: 0 + 00	L11u. 0 + 00	0.00 Miles		Start: 0 + 00	L11u. 0 + 00	0.00 Miles	
Double Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Trench (Mile) Four Track Construction/Reconstruction At-Grad-	o (Milo)		Start: 0 + 00 Start: 905 + 00	End: 945 + 00	0.00 Miles 0.76 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 : 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 : 00	0.00 Miles 0.00 Miles	
Four Track Elevated (Mile)	e (Mile)		Start: 0 + 00	E11u. 945 + 00	0.76 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 905 + 00	End: 945 + 00	0.76 Miles	
Four Track Trench (Mile) Single Track At-Grade (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 905 + 00 Start: 0 + 00	End: 945 + 00	0.76 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	
Single Track Al-Grade (Wile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Single Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Single Track Trench (Mile) Freight Double Track - At Grade (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	
Freight Single Track - At Grade (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Section - Total									0.00 ±				0.00	
Double Track Section - At Grade Double Track Section - On Structure	Mile Mile	\$ 2,100,224 \$ 4,700,160			0.00 0.00				0.00 \$ 0.00 \$	-			0.00 \$ 0.00 \$	
3 Double Track Section - In Tunnel or Subway	Mile	\$ 4,700,160			0.00	\$ -			0.00 \$	-			0.00 \$	
4 Double Track Section - In Trench	Mile	\$ 4,700,160			0.00	\$ -			0.00 \$	-			0.00 \$	
Three Track - Total														
5 Three Track Section - At Grade	Mile	\$ 3,150,336			0	\$ -			0 \$	-			0 \$	
6 Three Track Section - On structure	Mile Mile	\$ 7,050,240 \$ 7,050,240			0				0 \$	-			0 \$	
7 Three Track Section - In Tunnel or Subway 8 Three Track Section - In Trench	Mile	\$ 7,050,240 \$ 7,050,240			0				0 \$	-			0 \$	
		, ,			Š									
Four Track Section - Total Four-track Section - At Grade	Mile	\$ 4,200,448			0.76	\$ 3,182,158			0.00 \$				0.00 \$	
Four-Track Section - At Grade	Mile	\$ 9,400,320			0.76				0.00 \$	-			0.00 \$	
Four-Track Section - In Tunnel or Subway	Mile	\$ 9,400,320			0	\$ -			0.00 \$	-			0.76 \$	7,121,455
Four-Track Section - In Trench	Mile	\$ 9,400,320			0	\$ -			0.76 \$	7,121,455			0.00 \$	-
Single Track - Total														
5 Single Track Section - At Grade	Mile				0				0 \$	-			0 \$	
6 Single Track Section - On structure 7 Single Track Section - In Tunnel or Subway	Mile Mile	\$ 2,350,080 \$ 2,350,080			0				0 \$	-			0 \$	-
8 Single Track Section - In Trench	Mile	\$ 2,350,080			0				0 \$	-			0 \$	-
9 Freight Double Track - At Grade 10 Freight Single Track - At Grade	Mile Mile				0				0 \$	-			0 \$	-
Troight Single Track 7tt Grade	Name .	ψ 1,017,012			J	*								
Earthwork Items	Agra	¢ 0.21/			10.10	¢ 02.001			10.10 ¢	02.001			10.10 6	02.001
1 Site Preparation - Undeveloped 2 Total Cut	Acre CY	\$ 9,216 \$ 6.00			10.10 0.00				10.10 \$ 162962.96 \$	93,091 977,778			10.10 \$ 162962.96 \$	93,091 977,778
3 Total Fill	CY	\$ 6.00			0.00	\$ -			0.00 \$	-			0.00 \$	
4 Borrow 5 Spoil	CY CY	\$ 13.00 \$ 13.00			0.00 0.00				0.00 \$ 162962.96 \$	2,118,519			0.00 \$ 162962.96 \$	2,118,519
6 Landscape erosion Control	Acre				0.00	\$ -			10.10 \$	62,061			0.00 \$	2,110,317
7 Security Fencing (Both sides of ROW)	Mile	\$ 144,384			0.76	\$ 109,382			0.76 \$	109,382			0.00 \$	-
8 Special Drainage Facilities	5% Ea	arthwork				\$ 10,124			\$	168,041			\$	159,469
Structures, Tunnels, Walls														
1 Standard Structure (2 tracks) Standard Structure (4 tracks)	Mile Mile	\$ 34,972,672 \$ 52,459,008			0	\$ -			0 \$	-			0 \$	•
2 High Structure	Mile	\$ 40,424,448				\$ -			\$	-			\$	
3 Long Span Structure	Mile	\$ 61,919,232				\$ -			\$	-			\$	
4 Waterway Crossing - Primary 5 Waterway Crossing - Secondary (Irrigation Cana	Mile Mile	\$ 85,342,208 \$ 92,049,408				\$ - \$ -			\$	-			\$	
6 Twin Single Track Drill&Blast (<6 Miles)	Mile	\$ 142,731,264				\$ -			\$	-			\$	
7 Twin Single Track TBM (<6 Miles)	Mile	\$ 106,637,312				-			\$	-			\$	
8 Twin Single Track TBM w/3rd Tube (<6 Miles) 9 Double Track Drill & Blast	Mile Mile	\$ 176,720,896 \$ 146,887,680			0	\$ - \$ -			0 \$	-			0 \$	
10 Double Track Mined (Soft Soil)	Mile	\$ 79,200,000			-	\$ -			\$	-			\$	
Double Track TBM (<6 Miles)	Mile	\$ 106,637,312				-								
Double Track TBM w/3rd Tube (>6 Miles) 11 Seismic Chamber (Drill & Blast/Mined)	Mile ea	\$ 176,720,896 \$ 126,205,952				\$ - \$ -			\$	_			s	
12 Crossovers	ea	\$ 442,368				\$ -			\$	-			\$	
13 Cut & Cover Double Track Tunnel 14 Trench Long (2 tracks) (1000 + ft)	Mile Mile	\$ 131,246,080 \$ 57,524,224			0				0 \$ 0.76 \$	43,578,958			0 \$	
Trench Long (2 tracks) (1000 + 1) Trench Long (4 tracks) (1000 + ft)	Mile	\$ 57,524,224 \$ 86,286,336			U	Ψ -			0.70 \$	43,318,738			0 \$	
15 Trench Short (2 tracks) (<1000 ft)	Mile	\$ 78,843,904				\$ -			\$	-			\$	
Trench Short (4 tracks) (<1000 ft) 16 Mechanical & Electrical for Tunnels	Mile Mile	\$ 118,265,856 \$ 11,848,704			0	¢			0 6				0.76 \$	8,976,29°
17 Retaining Walls	Mile	\$ 8,613,888			0	\$ -			0.00 \$	-			0.76 \$	0,710,29
18 Containment Walls	Mile	\$ 5,907,456			Š	\$ -			0.00 \$	-			\$	
19 Single Track Cut and Cover Subway	Mile Mile	\$ 131,246,080				\$ -			\$	-			\$	
Four Track Drill & Blast Four Track Mined (Soft Soil)	Mile	\$ 293,775,360 \$ 158,400,000				\$ - \$ -				-			\$	
Four Track TBM (<6 Miles)	Mile	\$ 213,274,624				\$ -								
Four Track Cut & Cover Tuppel	Mile Mile	\$ 353,441,792				\$ -			0.00				0.74	100 057 (07
Four Track Cut & Cover Tunnel	Mile	\$ 262,492,160	I	ı l	0.00	φ -		I	0.00 \$	-	I	I	0.76 \$	198,857,697

COST ELEMENTS	UNIT	UNIT PRICE		At-Grade	e (4 tracks)			Open Tre	nch (2 tracks)			Covered Tr	ench (4 tracks)	
Subsection 3		Base: 2009	Start: 905 + 00	End: 945 + 00	A 0.76	Miles	Start: 905 + 00	End: 945 + 00	A 0.761	Miles	Start: 905 + 00	End: 945 + 00	A 0.76	Miles
		(3rd Quarter)	Start. 700 1 00	E11d. 710 1 00			Start. 700 + 00	E11a. 710 1 00	_		Start. 700 1 00	End. 710 1 00		
Subsection Details Double Track At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost	Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost	Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost
Double Track Elevated (Mile)			Start: 0 + 00		0.00 Miles]	Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Tunnel (Mile) Double Track Trench (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	+	Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 905 + 00	End: 945 + 00	0.76 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile) Four Track Tunnel (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	+	Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 905 + 00	End: 945 + 00	0.00 Miles 0.76 Miles	
Four Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 905 + 00	End: 945 + 00	0.76 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Grade Separations Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban) Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped) Street Bridging HSR Trench Minor Crossing Closures	ea ea ea ea ea ea ea ea ea ea	\$ 13,284,352 \$ 19,926,528 \$ 2,759,680 \$ 2,029,568 \$ 3,563,520 \$ 3,593,216 \$ 2,850,816 \$ 3,171,328 \$ 1,398,784 \$ 87,040			1	\$ - 5 \$ - 7 \$ - 7			9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	- - - - - - - -				
Building Items Intermediate Passenger Stations Terminal Passenger Stations Caltrain Passenger Station - At-Grade Caltrain Passenger Station - On Structure Caltrain Passenger Station - In Tunnel or Subway Caltrain Passenger Station - In Trench Maintenance Facility Parking - Structures Parking - At Grade	Each Each Each Each Each Each Each space	\$15,000,000 \$15,000,000 \$15,000,000 \$15,000,000 \$123,921,884 \$				\$			9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	- - - - - - -				
Rail & Utility Relocation Single Track Relocation (Temporary) Single Track Relocation (Permanent) Single Track Removal Major Utility Relocations - Dense Urban Major Utility Relocations - Urban Major Utility Relocations - Dense Suburban Major Utility Relocations - Suburban Major Utility Relocations - Suburban Major Utility Relocations - Undeveloped	Mile Mile Mile Mile Mile Mile Mile	\$ 2,000,896 \$ 2,000,896 \$ 130,048 \$ 1,548,288 \$ 1,084,416 \$ 775,168 \$ 464,896 \$ 30,720				\$			9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	-				
ROW (Not Included) ROW required for each segment Dense Urban Urban Dense Suburban Suburban Undeveloped ROW required for Temp. Construction Easement	Acre Acre Acre Acre Acre	\$ 2,786,321 \$ 1,371,510 \$ 908,134 \$ 208,418 \$ 3,642				\$ - \$ - \$ - \$ -			\$ 9 9 9 9	-				
1 Dense Urban 2 Urban 3 Dense Suburban 4 Suburban 5 Undeveloped Right-of-Way Required for Stations, Maintenance & Parking Facilities 6 Dense Urban 7 Urban 8 Dense Suburban 9 Suburban	Acre Acre Acre Acre Acre Acre Acre Acre	\$ 2,786,321 \$ 1,371,510 \$ 908,134 \$ 208,418				\$			9999	- - - - - - - -				
10 Undeveloped Environmental Mitigation = 3% Line Costs	Acre	\$ 3,642				\$ 104,454			9	1,626,878				6,549,129
System Elements 1 Signaling (ATC) 2 Communications (w/ Fiber Optic Backbone) 3 Wayside Protection System	Mile Mile Mile	\$ 2,070,000 \$ 540,000 \$ 108,000			0.76 0.76	5 \$ 1,568,182 5 \$ 409,091			0.76 \$ 0.76 \$ 0.76 \$	1,568,182 409,091			0.76 0.76 0.76	1,568,182 409,091
Electrification Items 1 Traction Power supply 2 Traction Power Distribution Program Implementation Costs (per screening) Program Implementation Costs	Mile Mile otal	\$ 1,170,000 \$ 1,485,000			0.76 0.76				0.76 0.76 \$	1,125,000 59,926,616				
Contingencies (per screening) (25%)						\$ 1,914,176			\$, ,				57,230,971
Subtotal						\$ 11,523,337			\$	90,189,557				344,530,443
Subtotal (Rounded)						\$ 12,000,000				90,000,000				\$ 345,000,000

COST ELEMENTS	UNIT	UNIT PRICE			duct (4 tracks)				ich (4 tracks)				ench (4 tracks)	
Subsection 3		Base: 2009 (3rd	Start: 945 + 00	End: 1045 + 00	B 1.891	Miles	Start: 945 + 00	End: 1045 + 00	B 1.89 Miles	<u> </u>	Start: 945 + 00	End: 1045 + 00	B 1.89 Mil	es
		Quarter)	Start. 743 1 00	E110. 1043 1 00			Start. 743 1 00	E11a. 1043 1 00			Start: 743 1 00	E110. 1040 1 00		C3
Subsection Details Double Track At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost	Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost	Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost
Double Track Elevated (Mile)			Start: 0 + 00	Endro Foo	0.00 Miles		Start: 0 + 00	Enail 6 + 66	0.00 Miles		Start: 0 + 00	Endroved	0.00 Miles	
Double Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Trench (Mile) Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	
Four Track Elevated (Mile)			Start: 945 + 00	End: 1045 + 00	1.89 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 945 + 00	End: 1045 + 00	1.89 Miles	
Four Track Trench (Mile) Double Track Section - Total			Start: 0 + 00		0.00 Miles		Start: 945 + 00	End: 1045 + 00	1.89 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
1 Double Track Section - At Grade	Mile	\$ 2,100,224			0.00				0.00 \$	-			0.00 \$	-
2 Double Track Section - On Structure	Mile	\$ 4,700,160			0.00				0.00 \$	-			0.00 \$	-
3 Double Track Section - In Tunnel or Subway 4 Double Track Section - In Trench	Mile Mile	\$ 4,700,160 \$ 4,700,160			0.00 0.00				0.00 \$ 0.00 \$	-			0.00 \$ 0.00 \$	-
		, ,,,,,,,,,				•			1					
Four Track Section - Total Four-track Section - At Grade	Mile	\$ 4.200.448			0.00	¢.			0.00 \$				0.00	
Four-Track Section - On Structure	Mile	\$ 4,200,448 \$ 9,400,320			0.00 1.89				0.00 \$	-			0.00 \$ 0.00 \$	-
Four-Track Section - In Tunnel or Subway	Mile	\$ 9,400,320			0.00	\$ -			0.00 \$	-			1.89 \$	17,803,636
Four-Track Section - In Trench	Mile	\$ 9,400,320			0.00	-			1.89 \$	17,803,636			0.00 \$	-
Single Track - Total														
5 Single Track Section - At Grade	Mile	\$ 1,549,312			0				0 \$	-			0 \$	-
6 Single Track Section - On structure	Mile	\$ 2,350,080			0				0 \$ 0 \$	-			0 \$	-
7 Single Track Section - In Tunnel or Subway 8 Single Track Section - In Trench	Mile Mile	\$ 2,350,080 \$ 2,350,080			0				0 \$	-			0 \$	-
9 Freight Double Track - At Grade 10 Freight Single Track - At Grade	Mile Mile	\$ 2,839,552 \$ 1,549,312			0				0 \$	-			0 \$	-
To Freight Single Hack - At Grade	Iville	\$ 1,549,512			U	.			0 \$	-			0 \$	-
Earthwork Items														
1 Site Preparation - Undeveloped 2 Total Cut	Acre CY	\$ 9,216 \$ 6.00			25.25 0				25.25 \$ 1629629.63 \$	232,727 9,777,778			25.25 \$ 1629629.63 \$	232,727 9,777,778
3 Total Fill	CY	\$ 6.00			0	*			0.00 \$	9,111,110			814814.81 \$	4,888,889
4 Borrow	CY	\$ 13.00			0.00				0.00 \$	-			0.00 \$	-
5 Spoil 6 Landscape erosion Control	CY Acre	\$ 13.00 \$ 6,144			0.00 0.00				1629629.63 \$ 25.25 \$	21,185,185 155,152			814814.81 \$ 0.00 \$	10,592,593
7 Security Fencing (Both sides of ROW)	Mile	\$ 144,384			0.00				1.89 \$	273,455			0.00 \$	-
8 Special Drainage Facilities	5% Ear	thwork				\$ 11,636			\$	1,581,215			\$	1,274,599
Structures, Tunnels, Walls														
1 Standard Structure (2 tracks)	Mile	\$ 34,972,672			0.00	\$ -			0 \$	-			0 \$	-
Standard Structure (4 tracks)	Mile	\$ 52,459,008			1.89	\$ 99,354,182								
2 High Structure 3 Long Span Structure	Mile Mile	\$ 40,424,448 \$ 61,919,232				\$ - \$ -			\$	-			\$	-
4 Waterway Crossing - Primary	Mile	\$ 85,342,208				\$ -			\$	-			\$	-
5 Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$ 92,049,408			0.01	\$ 697,344			0.01 \$	697,344			0.01 \$	697,344
6 Twin Single Track Drill&Blast (<6 Miles) 7 Twin Single Track TBM (<6 Miles)	Mile Mile	\$ 142,731,264 \$ 106,637,312				\$ - \$ -			\$	-			\$	-
8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$ 176,720,896				\$ -			\$	-			\$	-
9 Double Track Drill & Blast	Mile	\$ 146,887,680			0.00	-			0 \$	-			0 \$	-
10 Double Track Mined (Soft Soil) Double Track TBM (<6 Miles)	Mile Mile	\$ 79,200,000 \$ 106,637,312				-			\$	-			\$	-
Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 176,720,896												
11 Seismic Chamber (Drill & Blast/Mined)	ea	\$ 126,205,952				-			\$	-			\$	-
12 Crossovers 13 Cut & Cover Double Track Tunnel	ea Mile	\$ 442,368 \$ 131,246,080			0.00	• - \$ -			0 \$	-			0 \$	-
14 Trench Long (2 tracks) (1000 + ft)	Mile	\$ 57,524,224			0.00				0.00 \$	-			0.00 \$	-
Trench Long (4 tracks) (1000 + ft) 15 Trench Short (2 tracks) (<1000 ft)	Mile Mile	\$ 86,286,336 \$ 78,843,904				¢			1.89 \$	163,421,091			¢	
Trench Short (4 tracks) (<1000 ft)	Mile	\$ 78,843,904 \$ 118,265,856				Ψ -				-			\$	-
16 Mechanical & Electrical for Tunnels	Mile	\$ 11,848,704				\$ -			0.00 \$	-			1.89 \$	22,440,727
17 Retaining Walls 18 Containment Walls	Mile Mile	\$ 8,613,888 \$ 5,907,456			0.00	\$ - \$ -			0.00 \$ 0.00 \$	-			0.00 \$	-
19 Single Track Cut and Cover Subway	Mile	\$ 131,246,080				\$ -			\$	-			\$	-
Four Track Drill & Blast	Mile	\$ 293,775,360				\$ -			\$	-			\$	-
Four Track Mined (Soft Soil) Four Track TBM (<6 Miles)	Mile Mile	\$ 158,400,000 \$ 213,274,624				-				-			\$	-
Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 353,441,792												
Four Track Cut & Cover Tunnel	Mile	\$ 262,492,160			0.00	-			0.00 \$	-			1.89 \$	497,144,242
Grade Separations														
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$ 13,284,352				\$ -			\$	-			\$	-
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$ 19,926,528				\$ -			\$	-			\$	-
2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) 3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea ea	\$ 2,759,680 \$ 2,029,568				• - \$ -			\$ \$	-			\$ \$	-
4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 3,563,520				\$ -			Š	-			\$	-
5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$ 3,593,216				\$ -			\$	-			\$	-
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban) 6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea ea	\$ 2,850,816 \$ 3,171,328				• - \$ -			\$ \$	-			\$	-
7 Street Bridging HSR Trench	ea	\$ 1,398,784				\$ -			8 \$	11,190,272			0 \$	-
· · · · · · · · · · · · · · · · · · ·	•			. !				- '		•	-	. '	1	

COST ELEMENTS	UNIT	UNIT PRICE		Elevated Via	duct (4 tracks)			Open Trer	nch (4 tracks)			Covered Tr	ench (4 tracks)	
Subsection 3		Base: 2009 (3rd			В				В				В	
		Quarter)	Start: 945 + 00	End: 1045 + 00	1.89	Miles	Start: 945 + 00	End: 1045 + 00	1.89	Miles	Start: 945 + 00	End: 1045 + 00	1.89 I	Miles
Subsection Details		<u> </u>			Quant.	Cost			Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Tunnel (Mile) Double Track Trench (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile)			Start: 945 + 00	End: 1045 + 00	1.89 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 945 + 00	End: 1045 + 00	1.89 Miles	
Four Track Trench (Mile)	Las	¢ 07.040	Start: 0 + 00		0.00 Miles	¢	Start: 945 + 00	End: 1045 + 00	1.89 Miles	¢	Start: 0 + 00	End: 0 + 00	0.00 Miles	
8 Minor Crossing Closures	ea	\$ 87,040				\$ -				5 -			0 \$	-
Building Items														
1 Intermediate Passenger Stations	Each					\$ -				\$ -			\$	-
2 Terminal Passenger Stations	Each					\$ -				\$ -			\$	-
Caltrain Passenger Station - At-Grade Caltrain Passenger Station - On Structure	Each Each				2	\$ 30,000,000				\$ -			\$	-
Caltrain Passenger Station - In Tunnel or Subway	Each				-	\$ 30,000,000				\$ -			Š	-
Caltrain Passenger Station - In Trench	Each	\$15,000,000				\$ -			2	\$ 30,000,000			2 \$	30,000,000
3 Maintenance Facility	Each					\$ -				\$ -			\$	-
4 Parking - Structures 5 Parking - At Grade	space space					\$ -				\$ -			\$	-
of and of acc	Space	-				-				-			•	, <u>-</u>
Rail & Utility Relocation														
1 Single Track Relocation (Temporary)	Mile	\$ 2,000,896				\$ -				-			\$	-
2 Single Track Relocation (Permanent) 3 Single Track Removal	Mile Mile	\$ 2,000,896 \$ 130,048				\$ -				\$ -			\$	-
4 Major Utility Relocations - Dense Urban	Mile	\$ 1,548,288				\$ -				\$ -			\$	-
5 Major Utility Relocations - Urban	Mile	\$ 1,084,416				\$ -				\$ -			\$	-
6 Major Utility Relocations - Dense Suburban	Mile	\$ 775,168				\$ -				\$ -			\$	-
7 Major Utility Relocations - Suburban	Mile	\$ 464,896 \$ 30,720				\$ -				\$ -			\$	-
8 Major Utility Relocations - Undeveloped	Mile	\$ 30,720				5 -				-			3	-
ROW (Not Included)														
ROW required for each segment														
1 Dense Urban	Acre	\$ 2,786,321				\$ -				\$ -			\$	-
2 Urban 3 Dense Suburban	Acre Acre	\$ 1,371,510 \$ 908,134				\$ -				\$ -			\$	-
4 Suburban	Acre	\$ 208,418				\$ -				\$ -			\$	-
5 Undeveloped	Acre	\$ 3,642				\$ -				\$ -			\$	-
ROW required for Temp. Construction Easement														
1 Dense Urban 2 Urban	Acre Acre					\$ -				\$ -			\$	-
3 Dense Suburban	Acre					\$ -				\$ -			\$	-
4 Suburban	Acre					\$ -				\$ -			\$	-
5 Undeveloped	Acre					\$ -				\$ -			\$	-
Right-of-Way Required for Stations, Maintenance & Parking Facilities 6 Dense Urban	Acro	¢ 2.704.221				¢				¢				
7 Urban	Acre Acre	\$ 2,786,321 \$ 1,371,510				\$ -				\$ -			\$	- -
8 Dense Suburban	Acre	\$ 908,134				\$ -				\$ -			\$	-
9 Suburban	Acre	\$ 208,418				-				\$ -			\$	-
10 Undeveloped Environmental Mitigation = 3% Line Costs	Acre	\$ 3,642				\$ - \$ 4,442,986				\$ 7,689,536			\$	
Environmental minganon – 570 Line Costs						Ψ 4,442,700				ψ 1,007,030			•	, 17,040,070
System Elements		1.												
1 Signaling (ATC)	Mile	\$ 2,070,000			1.89				1.89				1.89 \$	
2 Communications (w/ Fiber Optic Backbone) 3 Wayside Protection System	Mile Mile	\$ 540,000 \$ 108,000			1.89 1.89				1.89 1.89				1.89 \$ 1.89 \$	
Singside Frotesian System	Ivine	100,000			1.07	201,040			1.07	207,343			1.07	204,040
Electrification Items		1.												
1 Traction Power supply	Mile	\$ 1,170,000			1.89				1.89				1.89 \$	
2 Traction Power Distribution	Mile Subtotal	\$ 1,485,000			1.89	\$ 2,812,500 \$ 162,718,648			1.89	\$ 2,812,500 \$ 274,183,526			1.89 \$	
Program Implementation Costs (per screening)	Jubilitai					\$ 41,493,255				\$ 69,916,799			\$	
Program Implementation Costs						,							ľ	
Contingencies (per coreoning) (25%)						¢ 40.770.770				¢ 40 E4E 000			s	155 710 570
Contingencies (per screening) (25%)						\$ 40,679,662				\$ 68,545,882			*	5 155,718,562
Subtotal	ı					\$ 244,891,565		•		\$ 412,646,207			\$	937,425,744
Subtotal (Rounded)						\$ 245,000,000				\$ 413,000,000				\$ 937,000,000

 \$ 245,000,000
 \$ 413,000,000
 \$ 937,000,000

COST ELEMENTS	UNIT	UNIT PRICE		Elevated Vi	aduct (4 tracks)			Open Tren	ch (4 tracks)			Covered Tre	nch (4 tracks)	
Subsection 3		Base: 2009	Start: 1045 + 00	End: 1087 + 00	C 0.8	0 Miles	Start: 1045 + 00	End: 1087 + 00	C 0.80 N	Miles	Start: 1045 + 00	End: 1087 + 00	0.80 M	iles
Subcaction Dataile		(3rd Quarter)					12.2.10.10.10.10							
Subsection Details Double Track At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost	Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost	Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost
Double Track Elevated (Mile) Double Track Tunnel (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	
Double Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile) Four Track Elevated (Mile)			Start: 0 + 00 Start: 1045 + 00	End: 0 + 00 End: 1087 + 00	0.00 Miles 0.80 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00 End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00 End: 0 + 00	0.00 Miles 0.00 Miles	
Four Track Tunnel (Mile)			Start: 0 + 00	Enu. 1007 ± 00	0.00 Miles	ł	Start: 0 + 00	L110. U + UU	0.00 Miles		Start: 1045 + 00	End: 1087 + 00	0.80 Miles	
Four Track Trench (Mile) Double Track Section - Total		1	Start: 0 + 00		0.00 Miles		Start: 1045 + 00	End: 1087 + 00	0.80 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
1 Double Track Section - At Grade	Mile	\$ 2,100,224			0.00				0.00				0.00 \$	
2 Double Track Section - On Structure 3 Double Track Section - In Tunnel or Subway	Mile Mile	\$ 4,700,160 \$ 4,700,160			0.00 0.00				0.00				0.00 \$ 0.00 \$	
4 Double Track Section - In Trench	Mile	\$ 4,700,160			0.00				0.00				0.00 \$	
Four Track Section - Total														
Four-track Section - At Grade	Mile	\$ 4,200,448			0.00				0.00				0.00 \$	
Four-Track Section - On Structure Four-Track Section - In Tunnel or Subway	Mile Mile	\$ 9,400,320 \$ 9,400,320			0.80 0.00				0.00				0.00 \$ 0.80 \$	
Four-Track Section - In Trench	Mile	\$ 9,400,320			0.00				0.80				0.00 \$	
Single Track - Total														
5 Single Track Section - At Grade	Mile	\$ 1,549,312			0.00				0				0 \$	-
6 Single Track Section - On structure 7 Single Track Section - In Tunnel or Subway	Mile Mile	\$ 2,350,080 \$ 2,350,080			0.00 0.00				0				0 \$	
8 Single Track Section - In Trench	Mile	\$ 2,350,080			0.00				0				0 \$	
9 Freight Double Track - At Grade	Mile	\$ 2,839,552			0.00	\$ _			0 :	\$			0 \$	_
10 Freight Single Track - At Grade	Mile	\$ 1,549,312			0.00				0				0 \$	
Earthwork Items														
1 Site Preparation - Undeveloped	Acre	\$ 9,216			10.61				10.61				10.61 \$	97,745
2 Total Cut 3 Total Fill	CY CY	\$ 6.00 \$ 6.00			0.00 0.00				684444.44 0.00				684444.44 \$ 342222.22 \$	4,106,667 2,053,333
4 Borrow	CY	\$ 13.00			0.00	\$ -			0.00	\$ -			0.00 \$	-
5 Spoil 6 Landscape erosion Control	CY Acre	\$ 13.00 \$ 6,144			0.00 0.00				684444.44 10.61				342222.22 \$ 0.00 \$	4,448,889
7 Security Fencing (Both sides of ROW)	Mile	\$ 144,384			0.00	\$ -			0.80	\$ 114,851			0.00 \$	-
8 Special Drainage Facilities	5% Ear	thwork I				\$ 4,887				\$ 664,110			\$	535,332
Structures, Tunnels, Walls														
1 Standard Structure (2 tracks) Standard Structure (4 tracks)	Mile Mile	\$ 34,972,672 \$ 52,459,008			0.00				0	\$ -			0 \$	-
2 High Structure	Mile	\$ 40,424,448			0.80	\$ 41,720,730				\$ -			\$	-
3 Long Span Structure 4 Waterway Crossing - Primary	Mile Mile	\$ 61,919,232 \$ 85,342,208				\$ \$				\$ -			\$	-
5 Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$ 92,049,408				\$ -			0.01	\$ 697,344			0.01 \$	697,344
6 Twin Single Track Drill&Blast (<6 Miles) 7 Twin Single Track TBM (<6 Miles)	Mile Mile	\$ 142,731,264 \$ 106,637,312				\$ - \$ -				\$ -			\$	-
8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$ 106,637,312				\$ -				\$ - \$ -			\$	-
9 Double Track Drill & Blast 10 Double Track Mined (Soft Soil)	Mile Mile	\$ 146,887,680 \$ 79,200,000			0.00	\$ - \$ -			0	\$ -			0 \$	-
Double Track TBM (<6 Miles)	Mile	\$ 106,637,312				Ψ - 				Ψ -) >	-
Double Track TBM w/3rd Tube (>6 Miles) 11 Seismic Chamber (Drill & Blast/Mined)	Mile ea	\$ 176,720,896 \$ 126,205,952				\$ -				¢			f	
12 Crossovers	ea	\$ 442,368				\$ -				\$ -			\$	
13 Cut & Cover Double Track Tunnel 14 Trench Long (2 tracks) (1000 + ft)	Mile Mile	\$ 131,246,080 \$ 57,524,224			0.00 0.00				0.00				0 \$	
Trench Long (4 tracks) (1000 + ft)	Mile	\$ 86,286,336							0.80				0.00 \$	-
Trench Short (2 tracks) (<1000 ft) Trench Short (4 tracks) (<1000 ft)	Mile Mile	\$ 78,843,904 \$ 118,265,856				\$ -			!	\$ -			\$	-
16 Mechanical & Electrical for Tunnels	Mile	\$ 11,848,704				\$ -			0.00				0.80 \$	
17 Retaining Walls 18 Containment Walls	Mile Mile	\$ 8,613,888 \$ 5,907,456			0.00	\$ - \$ -			0.00 0.00				0.00 \$	-
19 Single Track Cut and Cover Subway	Mile	\$ 131,246,080				\$ -			0.00	\$ -			\$	-
Four Track Drill & Blast Four Track Mined (Soft Soil)	Mile Mile	\$ 293,775,360 \$ 158,400,000				\$ - \$ -				\$ - \$			\$	-
Four Track TBM (<6 Miles)	Mile	\$ 213,274,624				-				· -			*	-
Four Track TBM w/3rd Tube (>6 Miles) Four Track Cut & Cover Tunnel	Mile Mile	\$ 353,441,792			0.00	¢			0.00	¢			0.80 \$	208,800,582
I OUI HACK CUL & COVER FUITHER	iviile	\$ 262,492,160			0.00	Φ -			0.00	φ -			0.80 \$	∠∪ŏ,ŏUU,582
Grade Separations	00	¢ 12.204.2E2				¢				¢				
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea ea	\$ 13,284,352 \$ 19,926,528				\$ -				\$ - \$			\$	-
2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$ 2,759,680				\$ -				\$ -			\$	-
3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) 4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea ea	\$ 2,029,568 \$ 3,563,520				\$ - \$ -				\$ - \$			\$	-
5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$ 3,593,216				\$ -				\$ -			\$	-
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban) 6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea ea	\$ 2,850,816 \$ 3,171,328				\$ - \$ -				\$ - \$ -			\$	-
7 Street Bridging HSR Trench	ea	\$ 1,398,784				\$ -			6	\$ 8,392,704			\$	-
	-		'	·	'	'	•	'	•	'		•		

COST ELEMENTS	UNIT	UNIT PRICE		Elevated Vi	aduct (4 tracks)			Open Tren	ich (4 tracks)			Covered Tre	ench (4 tracks)	
Subsection 3		Base: 2009	0	E 1 1007 00	С		01 1 4045 00	E 1 4007 00	С		01 1 1015 00	E 1007 00	С	
		(3rd Quarter)	Start: 1045 + 00	End: 1087 + 00	0.8	0 Miles	Start: 1045 + 00	End: 1087 + 00	0.80	Miles	Start: 1045 + 00	End: 1087 + 00	0.80	Miles
Subsection Details		l .			Quant.	Cost			Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile) Double Track Tunnel (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	
Double Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile)			Start: 1045 + 00	End: 1087 + 00	0.80 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Track (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00	End. 1007 - 00	0.00 Miles 0.80 Miles		Start: 1045 + 00	End: 1087 + 00	0.80 Miles 0.00 Miles	
Four Track Trench (Mile) 8 Minor Crossing Closures	ea	\$ 87,040	Start: 0 + 00		0.00 Miles	\$ -	Start: 1045 + 00	End: 1087 + 00	0.80 Miles	\$ -	Start: 0 + 00	End: 0 + 00	0.00 Miles	\$ -
o minor crossing crosures	Cu	Ψ 07,010				Ψ				•				•
Building Items														
1 Intermediate Passenger Stations	Each	\$ -				-				-				\$ -
2 Terminal Passenger Stations Caltrain Passenger Station - At-Grade	Each Each	\$ - \$15,000,000				-				\$ -				\$ -
Caltrain Passenger Station - On Structure	Each	\$15,000,000			1	\$ 15,000,000				\$ -				\$ -
Caltrain Passenger Station - In Tunnel or Subway	Each	\$15,000,000				\$ -				\$ -				\$ -
Caltrain Passenger Station - In Trench	Each	\$15,000,000				\$ -			1	\$ 15,000,000			1	\$ 15,000,000
3 Maintenance Facility	Each	\$ 123,921,884				-				-				\$ -
4 Parking - Structures 5 Parking - At Grade	space space	\$ -				-				\$ -				\$ -
5 Parking - At Grade	space	-				-				-				-
Rail & Utility Relocation														
1 Single Track Relocation (Temporary)	Mile	\$ 2,000,896				\$ -				\$ -				\$ -
2 Single Track Relocation (Permanent)	Mile	\$ 2,000,896				-				-				\$ -
3 Single Track Removal 4 Major Utility Relocations - Dense Urban	Mile Mile	\$ 130,048				-				\$ -				\$ -
5 Major Utility Relocations - Dense Orban	Mile	\$ 1,548,288 \$ 1,084,416				\$ -				\$ -				\$ -
6 Major Utility Relocations - Dense Suburban	Mile	\$ 775,168				\$ -				\$ -				\$ -
7 Major Utility Relocations - Suburban	Mile	\$ 464,896				\$ -				\$ -				\$ -
8 Major Utility Relocations - Undeveloped	Mile	\$ 30,720				\$ -				\$ -				\$ -
ROW (Not Included)														
ROW required for each segment														
1 Dense Urban	Acre	\$ 2,786,321				\$ -				\$ -				\$ -
2 Urban	Acre	\$ 1,371,510				\$ -				\$ -				\$ -
3 Dense Suburban	Acre	\$ 908,134				-				-				-
4 Suburban 5 Undeveloped	Acre	\$ 208,418 \$ 3,642				-				-				\$ -
ROW required for Temp. Construction Easement	Acre	\$ 3,042				÷				-				-
1 Dense Urban	Acre					\$ -				\$ -				\$ -
2 Urban	Acre					\$ -				\$ -				\$ -
3 Dense Suburban	Acre					\$ -				\$ -				\$ -
4 Suburban 5 Undeveloped	Acre Acre					\$ -				\$ -				\$ -
Right-of-Way Required for Stations, Maintenance & Parking Facilities	Acre					.				Ψ -				-
6 Dense Urban	Acre	\$ 2,786,321				\$ -				\$ -				\$ -
7 Urban		\$ 1,371,510				\$ -				\$ -				\$ -
8 Dense Suburban 9 Suburban	Acre	\$ 908,134				\$ -				\$ -				\$ - \$ -
10 Undeveloped	Acre Acre	\$ 208,418 \$ 3,642				\$ - \$ -				\$ - \$ -				\$ -
Environmental Mitigation = 3% Line Costs	71010	, 0,012				\$ 1,929,267				\$ 3,424,522				\$ 7,579,276
System Elements	h 4:1-	¢ 2,070,000			0.00	d 1/4/504			0.00	¢ 1/4/504			0.00	ė 1/4/504
1 Signaling (ATC) 2 Communications (w/ Fiber Optic Backbone)	Mile Mile	\$ 2,070,000 \$ 540,000			0.80 0.80				0.80 0.80				0.80 0.80	
3 Wayside Protection System	Mile	\$ 108,000			0.80				0.80				0.80	
		,			2,00	22,107			1.00					
Electrification Items														
1 Traction Power supply	Mile Mile	\$ 1,170,000 \$ 1,485,000			0.80 0.80				0.80				0.80	
2 Traction Power Distribution	Subtotal	a 1,485,000			0.80	\$ 1,181,250 \$ 70,512,161			0.80	\$ 1,181,250 \$ 121,849,248			0.80	\$ 1,181,250 \$ 264,495,778
Program Implementation Costs (per screening)	Subtotal					\$ 17,980,601				\$ 121,049,240				\$ 67,446,423
Program Implementation Costs										3.727888				, , , , , , , , , ,
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1						A				A 22 · · · · ·				
Contingencies (per screening) (25%)						\$ 17,628,040				\$ 30,462,312				\$ 66,123,944
Subtotal		l	<u> </u>			\$ 106,120,802		<u> </u>	l	\$ 183,383,118		<u> </u>	I.	\$ 398,066,145
														\$ 398,000,000
Subtotal (Rounded)						\$ 106,000,000				\$ 183,000,000				φ 370,UUU,UUU

COST ELEMENTS	UNIT	UNIT PRICE		Elevated Via	duct (4 tracks)			Open Trend	ch (4 tracks)			Covered Tre	ench (4 tracks)	
Subsection 3		Base: 2009			D				n				D	
		(3rd Quarter)	Start: 1087 + 00	End: 1140 + 00	1.00 M	liles	Start: 1087 + 00	End: 1140 + 00	1.00 N	liles	Start: 1087 + 00	End: 1140 + 00	1.00 N	liles
Subsection Details					Quant.	Cost			Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles	3000	Start: 0 + 00	End: 0 + 00	0.00 Miles	3000	Start: 0 + 00	End: 0 + 00	0.00 Miles	2001
Double Track Elevated (Mile) Double Track Tunnel (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	
Double Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile) Four Track Elevated (Mile)			Start: 0 + 00 Start: 1087 + 00	End: 0 + 00 End: 1140 + 00	0.00 Miles 1.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00 End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00 End: 0 + 00	0.00 Miles 0.00 Miles	
Four Track Tunnel (Mile)			Start: 0 + 00	L110. 1140 + 00	0.00 Miles		Start: 0 + 00	Elia. 0 + 00	0.00 Miles		Start: 1087 + 00	End: 1140 + 00	1.00 Miles	
Four Track Trench (Mile) Double Track Section - Total		1	Start: 0 + 00		0.00 Miles		Start: 1087 + 00	End: 1140 + 00	1.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
1 Double Track Section - At Grade	Mile	\$ 2,100,224			0.00 \$	-			0.00 \$				0.00 \$	-
2 Double Track Section - On Structure 3 Double Track Section - In Tunnel or Subway	Mile Mile	\$ 4,700,160 \$ 4,700,160			0.00 \$ 0.00 \$	-			0.00 \$ 0.00 \$				0.00 \$ 0.00 \$	
4 Double Track Section - In Trench	Mile	\$ 4,700,160			0.00 \$	-			0.00 \$				0.00 \$	
Four Track Section - Total														
Four-track Section - At Grade	Mile	\$ 4,200,448			0.00 \$				0.00 \$				0.00 \$	
Four-Track Section - On Structure Four-Track Section - In Tunnel or Subway	Mile Mile	\$ 9,400,320			1.00 \$	9,435,927			0.00 \$				0.00 \$	
Four-Track Section - In Turiner of Subway	Mile	\$ 9,400,320 \$ 9,400,320			0.00 \$ 0.00 \$				0.00 \$ 1.00 \$				1.00 \$ 0.00 \$	
					[•				
Single Track - Total 5 Single Track Section - At Grade	Mile	\$ 1,549,312			0.00 \$	-			0 \$	-			0 \$	
6 Single Track Section - On structure	Mile	\$ 2,350,080			0.00 \$	-			0 \$				0 \$	-
7 Single Track Section - In Tunnel or Subway 8 Single Track Section - In Trench	Mile Mile	\$ 2,350,080 \$ 2,350,080			0.00 \$ 0.00 \$				0 \$				0 \$	-
9 Freight Double Track - At Grade 10 Freight Single Track - At Grade	Mile Mile	\$ 2,839,552 \$ 1,549,312			0.00 \$ 0.00 \$				0 \$				0 \$	
F-athropal Harra														
Earthwork Items 1 Site Preparation - Undeveloped	Acre	\$ 9,216			13.38 \$	123,345			13.38 \$	123,345			13.38 \$	123,345
2 Total Cut	CY	\$ 6.00			0.00 \$				863703.70 \$	5,182,222			863703.70 \$	5,182,222
3 Total Fill 4 Borrow	CY	\$ 6.00 \$ 13.00			0.00 \$ 0.00 \$	-			0.00 \$ 0.00 \$				431851.85 \$ 0.00 \$	
5 Spoil	CY	\$ 13.00			0.00 \$				863703.70 \$				431851.85 \$	
6 Landscape erosion Control 7 Security Fencing (Both sides of ROW)	Acre Mile	\$ 6,144 \$ 144,384			0.00 \$ 0.00 \$	-			13.38 \$ 1.00 \$				0.00 \$ 0.00 \$	
8 Special Drainage Facilities	5% Earl				\$	6,167			1.00 \$				\$	
Structures, Tunnels, Walls														
1 Standard Structure (2 tracks)	Mile	\$ 34,972,672			0.00 \$	-			0 \$	-			0 \$	
Standard Structure (4 tracks)	Mile Mile	\$ 52,459,008 \$ 40,424,448			1.00 \$	52,657,716								
2 High Structure 3 Long Span Structure	Mile	\$ 61,919,232			\$	-			\$	-			\$	-
4 Waterway Crossing - Primary	Mile	\$ 85,342,208			\$	-			\$	-			\$	
5 Waterway Crossing - Secondary (Irrigation Canal) 6 Twin Single Track Drill&Blast (<6 Miles)	Mile Mile	\$ 92,049,408 \$ 142,731,264			\$	-			0.01 \$	697,344			0.01 \$	697,344
7 Twin Single Track TBM (<6 Miles)	Mile	\$ 106,637,312			\$				\$				\$	-
8 Twin Single Track TBM w/3rd Tube (<6 Miles) 9 Double Track Drill & Blast	Mile Mile	\$ 176,720,896 \$ 146,887,680			0.00 \$				0 \$				\$	
10 Double Track Mined (Soft Soil)	Mile	\$ 79,200,000			\$				\$					-
Double Track TBM (<6 Miles) Double Track TBM w/3rd Tube (>6 Miles)	Mile Mile	\$ 106,637,312 \$ 176,720,896												
11 Seismic Chamber (Drill & Blast/Mined)	ea	\$ 176,720,896			\$	-			\$	-			\$	
12 Crossovers 13 Cut & Cover Double Track Tunnel	ea Mile	\$ 442,368 \$ 131,246,080			0.00	-			0 \$				0 \$	-
14 Trench Long (2 tracks) (1000 + ft)	Mile	\$ 131,246,080 \$ 57,524,224			0.00 \$ 0.00 \$				0.00 \$				0.00 \$	-
Trench Long (4 tracks) (1000 + ft)	Mile	\$ 86,286,336							1.00 \$					
15 Trench Short (2 tracks) (<1000 ft) Trench Short (4 tracks) (<1000 ft)	Mile Mile	\$ 78,843,904 \$ 118,265,856			\$	-			\$	-			\$	-
16 Mechanical & Electrical for Tunnels	Mile	\$ 11,848,704			\$	-			0.00 \$				1.00 \$	
17 Retaining Walls 18 Containment Walls	Mile Mile	\$ 8,613,888 \$ 5,907,456			0.00 \$ 0.00 \$	-			0.00 \$ 0.00 \$				0.00 \$ 0.00 \$	
19 Single Track Cut and Cover Subway	Mile	\$ 131,246,080			\$				\$	-			\$	-
Four Track Drill & Blast Four Track Mined (Soft Soil)	Mile Mile	\$ 293,775,360 \$ 158,400,000			\$	-			\$	-			\$	
Four Track TBM (<6 Miles)	Mile	\$ 213,274,624				-			ŷ	_				
Four Track TBM w/3rd Tube (>6 Miles) Four Track Cut & Cover Tunnel	Mile Mile	\$ 353,441,792 \$ 262,492,160			0.00 \$				0.00 \$				1.00 \$	263,486,448
	IVIIIC	Ψ 202,472,100			0.00 \$	-			0.00 \$	-			1.00 \$	200,400,440
Grade Separations 1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$ 13,284,352			e				¢					
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$ 19,926,528			2 \$				\$	-			\$	-
2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$ 2,759,680			4 \$				\$	-			\$	-
3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) 4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea ea	\$ 2,029,568 \$ 3,563,520			\$				\$	-				-
5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$ 3,593,216			\$	-			\$	-			s	-
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban) 6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea ea	\$ 2,850,816 \$ 3,171,328			\$				\$				\$	
Optionalist of the property	l eq	ψ 3,1/1,328	I	ļ	1 3	-	l	ı	1 2	-	I	I	ı [3	-

COST ELEMENTS	U	NIT UNIT PRICE		Elevated Via	nduct (4 tracks)			Open Trer	nch (4 tracks)			Covered Tre	nch (4 tracks)	
Subsection 3		Base: 2009			D				D				D	
		(3rd Quarter)		End: 1140 + 00		0 Miles	Start: 1087 + 00	End: 1140 + 00	1.00 Miles		Start: 1087 + 00	End: 1140 + 00	1.00 N	Miles
Subsection Details Double Track At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost	Start: 0 + 00	End: 0 + 00	Quant. (0.00 Miles	Cost	Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost
Double Track Elevated (Mile)			Start: 0 + 00	End. 0 1 00	0.00 Miles		Start: 0 + 00	End. 0 1 00	0.00 Miles		Start: 0 + 00	Ella. 0 1 00	0.00 Miles	
Double Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Trench (Mile) Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	
Four Track Elevated (Mile)			Start: 1087 + 00	End: 1140 + 00	1.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Tunnel (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles		Start: 0 + 00	F	0.00 Miles		Start: 1087 + 00	End: 1140 + 00	1.00 Miles	
Four Track Trench (Mile) 7 Street Bridging HSR Trench	ea	\$ 1,398,784			0.00 Miles	\$ -	Start: 1087 + 00	End: 1140 + 00	1.00 Miles 6 \$	8,392,704	Start: 0 + 00	End: 0 + 00	0.00 Miles	<u> </u>
8 Minor Crossing Closures	ea					\$ -			\$	-			3	-
Building Items														
1 Intermediate Passenger Stations	E	ach \$ -	-			\$ -			\$	-				-
2 Terminal Passenger Stations	E	ach \$ -	-			\$ -			\$	-			\$	-
Caltrain Passenger Station - At-Grade		ach \$15,000,000			_	\$ -			\$	-			3	-
Caltrain Passenger Station - On Structure Caltrain Passenger Station - In Tunnel or Subway		ach \$15,000,000 ach \$15,000,000			l	\$ 15,000,000 \$ -			\$	-				· -
Caltrain Passenger Station - In Trench		ach \$15,000,000				\$ -			1 \$	15,000,000			1 3	15,000,000
3 Maintenance Facility		ach \$ 123,921,884				\$ -			\$	-,0,000				
4 Parking - Structures		ace \$ -	-			\$ -			\$	-			4	-
5 Parking - At Grade	sp	ace \$ -	-			\$ -			\$	-			3	-
Rail & Utility Relocation														
1 Single Track Relocation (Temporary)	Mi	le \$ 2,000,896	5			\$ -			\$	-			5	-
2 Single Track Relocation (Permanent)	Mi					\$ -			\$	-			\$	-
3 Single Track Removal	Mi					-			\$	-			3	-
4 Major Utility Relocations - Dense Urban 5 Major Utility Relocations - Urban	Mi Mi								\$ 6	-				-
6 Major Utility Relocations - Orban	Mi					\$ -			\$	-				-
7 Major Utility Relocations - Suburban	Mi					\$ -			\$	-				- -
8 Major Utility Relocations - Undeveloped	Mi	le \$ 30,720)			\$ -			\$	-			\$	-
ROW (Not Included)														
ROW required for each segment														
1 Dense Urban		re \$ 2,786,321				-			\$	-				-
2 Urban 3 Dense Suburban	Ac					-			\$	-				-
4 Suburban		re \$ 908,134 re \$ 208,418				\$ -			\$	-				-
5 Undeveloped	Ac					\$ -			\$	-				-
ROW required for Temp. Construction Easement						·			i i					
1 Dense Urban		re				-			\$	-				-
2 Urban 3 Dense Suburban	Ac	re re				-			\$	-				-
4 Suburban	Ac					\$ -			\$	-				-
5 Undeveloped	Ac					\$ -			\$	-				-
Right-of-Way Required for Stations, Maintenance & Parking Facilities														
6 Dense Urban		re \$ 2,786,321				-			\$					-
7 Urban 8 Dense Suburban	Ac Ac	re \$ 1,371,510 re \$ 908,134				\$ - \$ -			\$	-				-
9 Suburban	Ac					\$ -			\$					
10 Undeveloped		re \$ 3,642				\$ -			\$	-				-
Environmental Mitigation = 3% Line Costs						\$ 3,843,448			\$	4,132,142			\$	9,440,988
System Elements														
1 Signaling (ATC)	Mi				1.00				1.00 \$	2,077,841			1.00	
2 Communications (w/ Fiber Optic Backbone)	Mi				1.00				1.00 \$	542,045			1.00	
3 Wayside Protection System	Mi	le \$ 108,000)		1.00	\$ 108,409			1.00 \$	108,409			1.00	108,409
Electrification Items														
1 Traction Power supply	Mi				1.00					1,174,432			1.00	
2 Traction Power Distribution	Mi	le \$ 1,485,000)		1.00				1.00 \$	1,490,625			1.00	
Program Implementation Costs (nor corossing)	Subtotal					\$ 137,351,733 \$ 35,024,692				147,263,569 37,552,210				329,533,936 84,031,154
Program Implementation Costs (per screening) Program Implementation Costs						» 35,024,692			3	31,332,210			3	ο 84,031,154
Contingencies (per screening) (25%)						\$ 34,337,933			\$	36,815,892			3	82,383,484
Subtotal					l	\$ 206,714,358		1	\$ 2	221,631,671			9	495,948,573
Subtotal (Rounded)						\$ 207,000,000				2,000,000				496,000,000

	COST ELEMENTS	UNIT	UNIT PRICE		At-G	rade		
Sul	osection 3		Base: 2009					
			(3rd Quarter)	Start: 1140 + 00	End: 1164 + 00	0.45 l	Miles	6
	section Details ible Track At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles		Cost
	ible Track At-Grade (Mile)			Start: 0 + 00	Liid. 0 + 00	0.00 Miles		
	ıble Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		
	ıble Track Trench (Mile)			Start: 0 + 00		0.00 Miles		
	r Track Construction/Reconstruction At-Grade (Mile)			Start: 1140 + 00	End: 1164 + 00	0.45 Miles 0.00 Miles		
	ır Track Elevated (Mile) ır Track Tunnel (Mile)			Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles		
	r Track Trench (Mile)			Start: 0 + 00		0.00 Miles		
	Double Track Section - Total							
	Double Track Section - At Grade	Mile	\$ 2,100,224			0.00		-
	Double Track Section - On Structure	Mile	\$ 4,700,160 \$ 4,700,160			0.00 0.00		-
	Double Track Section - In Tunnel or Subway Double Track Section - In Trench	Mile Mile	\$ 4,700,160 \$ 4,700,160			0.00		-
7	Double Hack Section III Hench	IVIIIC	4,700,100			0.00	Ψ	
	Four Track Section - Total							
	Four-track Section - At Grade	Mile	\$ 4,200,448			0.45		1,909,295
	Four-Track Section - On Structure	Mile	\$ 9,400,320			0.00		-
	Four-Track Section - In Tunnel or Subway	Mile	\$ 9,400,320				\$	-
	Four-Track Section - In Trench	Mile	\$ 9,400,320			0	\$	•
	Single Track - Total							
	Single Track - Total Single Track Section - At Grade	Mile	\$ 1,549,312			n	\$	-
	Single Track Section - An orade Single Track Section - On structure	Mile	\$ 2,350,080				\$	
	Single Track Section - In Tunnel or Subway	Mile	\$ 2,350,080			0	\$	
8	Single Track Section - In Trench	Mile	\$ 2,350,080			0	\$	
_								
	Freight Double Track - At Grade	Mile	\$ 2,839,552			0		•
IU	Freight Single Track - At Grade	Mile	\$ 1,549,312			0	\$	•
	Earthwork Items							
1	Site Preparation - Undeveloped	Acre	\$ 9,216			0.00	\$	
	Total Cut	CY	\$ 6.00			0.00		
3	Total Fill	CY	\$ 6.00			0.00		
	Borrow	CY	\$ 13.00			0.00	\$	
	Spoil	CY	\$ 13.00			0.00		
	Landscape erosion Control	Acre	\$ 6,144			0.00		
	Security Fencing (Both sides of ROW)	Mile 5% Earl	\$ 144,384			0.45	\$ \$	65,629
0	Special Drainage Facilities	376 Eal	I I I I I I I I I I I I I I I I I I I				Þ	3,281
	Structures, Tunnels, Walls							
1	Standard Structure (2 tracks)	Mile	\$ 34,972,672			0.00	\$	-
	Standard Structure (4 tracks)	Mile	\$ 52,459,008					
	High Structure	Mile	\$ 40,424,448				\$	
	Long Span Structure	Mile	\$ 61,919,232				\$	
	Waterway Crossing - Primary	Mile Mile	\$ 85,342,208 \$ 92,049,408				\$ \$	•
	Waterway Crossing - Secondary (Irrigation Canal) Twin Single Track Drill&Blast (<6 Miles)	Mile	\$ 142,731,264				\$	
	Twin Single Track Dilliablas (<0 Miles)	Mile	\$ 106,637,312				\$	
	Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$ 176,720,896				\$	
	Double Track Drill & Blast	Mile	\$ 146,887,680			0		
	Double Track Mined (Soft Soil)	Mile	\$ 79,200,000				\$	
	Double Track TBM (<6 Miles)	Mile	\$ 106,637,312					
	Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 176,720,896					
	Seismic Chamber (Drill & Blast/Mined)	ea	\$ 126,205,952				\$	
	Crossovers Cut & Cover Double Track Tunnel	ea Mile	\$ 442,368 \$ 131,246,080			0	\$ \$	•
	Trench Long (2 tracks) (1000 + ft)	Mile	\$ 131,240,000				\$	
. 7	Trench Long (4 tracks) (1000 + ft)	Mile	\$ 86,286,336			U	Ψ	
٦	Trench Short (2 tracks) (<1000 ft)	Mile	\$ 78,843,904				\$	
J	Trench Short (4 tracks) (<1000 ft)	Mile	\$ 118,265,856					
	Mechanical & Electrical for Tunnels	Mile	\$ 11,848,704				\$	
6	Retaining Walls	Mile	\$ 8,613,888			0		
6 7	Containment Walls	Mile	\$ 5,907,456			0	*	
6 7 8		Mile Mile	\$ 131,246,080 \$ 293,775,360				\$ \$	
6 7 8	Single Track Cut and Cover Subway Four Track Drill & Blast						\$	
6 7 8	Four Track Drill & Blast			i			Ψ	
16 17 18	Four Track Drill & Blast Four Track Mined (Soft Soil)	Mile	\$ 158,400,000 \$ 213,274,624					
6 7 8 9	Four Track Drill & Blast Four Track Mined (Soft Soil) Four Track TBM (<6 Miles)		\$ 213,274,624					
6 7 8 9	Four Track Drill & Blast Four Track Mined (Soft Soil)	Mile Mile				0.00	\$	
6 7 8 9	Four Track Drill & Blast Four Track Mined (Soft Soil) Four Track TBM (<6 Miles) Four Track TBM w/3rd Tube (>6 Miles)	Mile Mile Mile	\$ 213,274,624 \$ 353,441,792			0.00	\$	
16 17 18 19	Four Track Drill & Blast Four Track Mined (Soft Soil) Four Track TBM (<6 Miles) Four Track TBM w/3rd Tube (>6 Miles) Four Track Cut & Cover Tunnel Grade Separations	Mile Mile Mile	\$ 213,274,624 \$ 353,441,792 \$ 262,492,160			0.00	\$	
6 7 8 9	Four Track Drill & Blast Four Track Mined (Soft Soil) Four Track TBM (<6 Miles) Four Track TBM w/3rd Tube (>6 Miles) Four Track Cut & Cover Tunnel Grade Separations Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	Mile Mile Mile Mile	\$ 213,274,624 \$ 353,441,792 \$ 262,492,160 \$ 13,284,352			0.00	\$	
16 17 18 19	Four Track Drill & Blast Four Track Mined (Soft Soil) Four Track TBM (<6 Miles) Four Track TBM w/3rd Tube (>6 Miles) Four Track Cut & Cover Tunnel Grade Separations Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	Mile Mile Mile Mile ea ea	\$ 213,274,624 \$ 353,441,792 \$ 262,492,160 \$ 13,284,352 \$ 19,926,528			0.00	\$	
16 17 18 19	Four Track Drill & Blast Four Track Mined (Soft Soil) Four Track TBM (<6 Miles) Four Track TBM w3rd Tube (>6 Miles) Four Track Cut & Cover Tunnel Grade Separations Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	Mile Mile Mile Mile ea ea ea	\$ 213,274,624 \$ 353,441,792 \$ 262,492,160 \$ 13,284,352 \$ 19,926,528 \$ 2,759,680			0.00	\$ \$ \$	
16 17 18 19	Four Track Drill & Blast Four Track Mined (Soft Soil) Four Track TBM (<6 Miles) Four Track TBM (<6 Miles) Four Track TBM (<6 Miles) Four Track Cut & Cover Tunnel Grade Separations Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	Mile Mile Mile Mile ea ea ea ea	\$ 213,274,624 \$ 353,441,792 \$ 262,492,160 \$ 13,284,352 \$ 19,926,528 \$ 2,759,680 \$ 2,029,568			0.00	\$ \$ \$	
16 17 18 19 1	Four Track Drill & Blast Four Track Mined (Soft Soil) Four Track TBM (-6 Miles) Four Track TBM w/3rd Tube (-6 Miles) Four Track Cut & Cover Tunnel Grade Separations Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban) Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Urban) Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Undeveloped) Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Undeveloped)	Mile Mile Mile Mile ea ea ea ea ea	\$ 213,274,624 \$ 353,441,792 \$ 262,492,160 \$ 13,284,352 \$ 19,926,528 \$ 2,759,680 \$ 2,029,568 \$ 3,563,520			0.00	\$ \$ \$ \$	
16 17 18 19 1 2 3 4 5	Four Track Drill & Blast Four Track Mined (Soft Soil) Four Track TBM (<6 Miles) Four Track TBM (<6 Miles) Four Track TBM (<6 Miles) Four Track Cut & Cover Tunnel Grade Separations Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	Mile Mile Mile Mile ea ea ea ea	\$ 213,274,624 \$ 353,441,792 \$ 262,492,160 \$ 13,284,352 \$ 19,926,528 \$ 2,759,680 \$ 2,029,568			0.00	\$ \$ \$	

Dozuble Track Event (Mile) Dozuble Track Event (Mile) Dozuble Track Event (Mile) Dozuble Track Event (Mile) Dozuble Track Track (Mile) Dozuble Track (Mile)	COST ELEMENTS	UNIT	UNIT PRICE		At-G	rade		
Solit 140 100 End 1104 100 D.45 Miles	Subsection 3					_		
Subsection Debails			(3rd Quarter)	Start: 11/0 : 00			Milos	
Dozuble Track Event (Mile) Dozuble Track Event (Mile) Dozuble Track Event (Mile) Dozuble Track Event (Mile) Dozuble Track Track (Mile) Dozuble Track (Mile)				Jiani. 1140 + 00	LIIG. 1104 ± 00	0.40	willes	,
Double Track Evented (Mile) Double Track Track Track (Mile) Start 0 + 0.0 0.00 Miles								Cost
Double Frack Franch (Mile)					End: 0 + 00			
Doubble Track Fronch (Mile)								
Four Track Construction/Reconstruction At Grade (Mile)								
					End: 1164 + 00			
Store Trach Mile					End: 0 + 00			
Street Bildging 15KF Trench								
Billiot Crossing Closures ea \$ 87,040 \$ S		02	¢ 1300 70 <i>1</i>	Start: 0 + 00		0.00 Miles	¢	
Intermediate Passenger Stations Each \$								-
Intermediate Passenger Stations			, , , , , , , , , , , , , , , , , , , ,				ļ .	
2 Terminal Presenger Station - Al Grade Each S Caltain Presenger Station - Al Grade Each S S S S S S S S S	Building Items						١.	
Callrain Passenger Station - Al-Grade	1 Intermediate Passenger Stations							-
Calirain Passenge Station - In Trender of Subway Each \$15,000,000 \$ \$ \$ \$ \$ \$ \$ \$ \$						1		15,000,000
Calirain Passenger Station - In Trumel or Subway Each \$15,000,000 \$ \$ \$ \$ \$ \$ \$ \$ \$						'		-
Standing	Caltrain Passenger Station - In Tunnel or Subway	Each					\$	-
A Parking - Structures Space S S S Parking - At Grade Space S S Parking - At Grade Space S S S Parking - At Grade Space S S S Parking - At Grade Space S S S Parking - At Grade S S S Parking - At Grade S S S S S S S S S								-
S Parking - Al Grade								-
Rail & Utility Relocation Single Track Relocation (Temporary) Mile \$ 2,000.896 \$ 5								-
Single Track Relocation (Temporary)	Sir divining At Grade	space					Ψ	-
Z Single Track Relocation (Permanent)								
Simple Track Removal Mile S 130,048 S S Major Utility Relocations - Urban Mile S 1,548,288 S S S Major Utility Relocations - Urban Mile S 1,548,288 S S Major Utility Relocations - Undeveloped Mile S 7,51,68 S S Major Utility Relocations - Suburban Mile S 7,51,68 S S Major Utility Relocations - Suburban Mile S 7,51,68 S S Major Utility Relocations - Suburban Mile S 7,51,68 S S Major Utility Relocations - Undeveloped Mile S 7,51,68 S S Major Utility Relocations - Undeveloped Mile S 7,51,68 S S Major Utility Relocations - Undeveloped Mile S 7,66,321 S S Major Utility Relocations - Undeveloped Acre S 7,86,321 S S Major Utility Relocations - Undeveloped Acre S 7,86,321 S S Major Utility Relocations - Undeveloped Acre S 3,642 S S Major Utility Relocations - Undeveloped Acre S 3,642 S S Major Utility Relocations - Undeveloped Acre S 3,642 S S Major Utility Relocations - Undeveloped Acre S 3,642 S S Major Utility Relocations - Undeveloped Acre S Major Utility Relocations - Major Utility Relocations - Major Utility Relocations - Undeveloped Acre S Major Utility Relocations - S Major Utility Relocations -	1 Single Track Relocation (Temporary)							-
All Agin Utility Relocations - Dense Urban Mile S. 1,548,288 S. 5 Major Utility Relocations - Urban Mile S. 1,731,168 S. 775,168 S	2 Single Track Relocation (Permanent)							-
SMajor Utility Relocations - Urban	3 Single Track Removal 4 Major Utility Palocations - Dense Urban							-
Mile S 775,168 S S A64,896 S A	5 Major Utility Relocations - Dense orban							-
ROW (Not Included) ROW required for each segment	6 Major Utility Relocations - Dense Suburban							-
ROW (Not Included) ROW required for each segment Acre	7 Major Utility Relocations - Suburban							-
ROW required for each segment Dense Urban	8 Major Utility Relocations - Undeveloped	Mile	\$ 30,720				\$	-
ROW required for each segment Dense Urban	DOW (Not Included)							
1 Dense Urban								
2 Urthan		Acre	\$ 2,786,321				\$	-
A Suburban			\$ 1,371,510					-
Subtraction								-
ROW required for Temp. Construction Easement 1 Dense Urban Acre								-
1 Dense Urban 2 Ulrban 3 Dense Suburban 4 Suburban 5 Undeveloped Right-of-Way Required for Stations, Maintenance & Parking Facilities 6 Dense Urban 7 Ulrban 8 Dense Suburban 9 Suburban 9 Suburban 10 Undeveloped Environmental Mitigation = 3% Line Costs System Elements 1 Signaling (ATC) 2 Communications (w/ Fiber Optic Backbone) 3 Wayside Protection System 4 Electrification Items 1 Traction Power supply 1 Traction Power Distribution Program Implementation Costs (per screening) Program Implementation Costs Contingencies (per screening) (25%)		Acre	\$ 3,042				Þ	-
3 Dense Suburban		Acre					\$	-
4 Suburban 5 Undeveloped Right-of-Way Required for Stations, Maintenance & Parking Facilities 6 Dense Urban 7 Urban 8 Dense Suburban 9 Suburban 10 Undeveloped Environmental Mitigation = 3% Line Costs System Elements 1 Signaling (ATC) 2 Communications (w Fiber Optic Backbone) 3 Wayside Protection System Electrification Items 1 Traction Power Distribution Program Implementation Costs (per screening) Program Implementation Costs (per screening) Program Implementation Costs Contingencies (per screening) (25%)	2 Urban	Acre					\$	-
5 Undeveloped Right-of-Way Required for Stations, Maintenance & Parking Facilities 6 Dense Urban 7 Urban 8 Dense Suburban 9 Suburban 10 Undeveloped Environmental Mitigation = 3% Line Costs System Elements 1 Signaling (ATC) 2 Communications (w/ Fiber Optic Backbone) 3 Wayside Protection System Electrification Items 1 Traction Power Distribution Program Implementation Costs (per screening) Program Implementation Costs Contingencies (per screening) (25%) Acre 1 S. 2,786,321 Acre 2 1,371,510 3 Acre 3 208,418 4 2 208,418 5 3.642 5 3.642 5 3.642 5 3.642 6 2.770,000 6 0.45 \$ Mile 8 2,070,000 6 0.45 \$ Mile 8 1,170,000 7 0.45 \$ Mile 8 1,170,000 8 1,485,000 8 1,485,000 9 0.45 \$ Subtotal Program Implementation Costs (per screening) Program Implementation Costs (per screening) Program Implementation Costs Contingencies (per screening) (25%)								-
Right-of-Way Required for Stations, Maintenance & Parking Facilities Acre Stations Stations Acre Stations								-
6 Dense Urban 7 Urban 8 Dense Suburban 9 Suburban 10 Undeveloped Environmental Mitigation = 3% Line Costs System Elements 1 Signaling (ATC) 2 Communications (w/ Fiber Optic Backbone) 3 Wayside Protection System Electrification Items 1 Traction Power Supply 2 Traction Power Distribution Subtotal Program Implementation Costs (per screening) Program Implementation Costs Contingencies (per screening) (25%) Acre \$ 2,786,321 \$ 1,371,510 \$ \$ 4,371,510 \$ \$ 4,371,510 \$ \$ 4,371,510 \$ \$ 4,371,510 \$ \$ 4,371,510 \$ \$ 4,371,510 \$ \$ 4,371,510 \$ \$ 4,371,510 \$ \$ 4,371,510 \$ \$ 4,371,510 \$ \$ 4,371,510 \$ \$ 4,371,510 \$ \$ 4,371,510 \$ \$ 4,371,510 \$ \$ 5,40,000 \$ 0.45 \$ 5,40	l	Acre					Þ	
7 Urban Acre \$ 1,371,510 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$		Acre	\$ 2,786,321				\$	
9 Suburban 10 Undeveloped Environmental Mitigation = 3% Line Costs System Elements 1 Signaling (ATC) 2 Communications (w/ Fiber Optic Backbone) 3 Wayside Protection System Electrification Items 1 Traction Power supply 2 Traction Power Distribution Program Implementation Costs (per screening) Program Implementation Costs Contingencies (per screening) (25%) Acre \$ 208,418	7 Urban		\$ 1,371,510				\$	
10 Undeveloped Environmental Mitigation = 3% Line Costs System Elements 1 Signaling (ATC) 2 Communications (w/ Fiber Optic Backbone) 3 Wayside Protection System Electrification Items 1 Traction Power supply 2 Traction Power Distribution Subtotal Program Implementation Costs (per screening) Program Implementation Costs Contingencies (per screening) (25%)								-
Environmental Mitigation = 3% Line Costs System Elements 1 Signaling (ATC) 2 Communications (w/ Fiber Optic Backbone) 3 Wayside Protection System Electrification Items 1 Traction Power supply 2 Traction Power Distribution Program Implementation Costs (per screening) Program Implementation Costs Contingencies (per screening) (25%) Mile \$ 2,070,000 Mile \$ 540,000 Mile \$ 108,000 Mile \$ 1,170,000 Mile \$ 1,170,000 Mile \$ 1,485,000 Subtotal \$ 1485,000 \$ 14								-
System Elements 1 Signaling (ATC) 2 Communications (w/ Fiber Optic Backbone) 3 Wayside Protection System Electrification Items 1 Traction Power supply 2 Traction Power Distribution Program Implementation Costs (per screening) Program Implementation Costs Contingencies (per screening) (25%) Mile \$ 2,070,000		Acre	\$ 3,042					509,346
1 Signaling (ATC) 2 Communications (w/ Fiber Optic Backbone) 3 Wayside Protection System Electrification Items 1 Traction Power supply 2 Traction Power Distribution Program Implementation Costs (per screening) Program Implementation Costs Contingencies (per screening) (25%) Mile \$ 2,070,000	Environmental management - 576 Enric 50515						"	007,010
2 Communications (w/ Fiber Optic Backbone) 3 Wayside Protection System Electrification Items 1 Traction Power supply 2 Traction Power Distribution Subtotal Program Implementation Costs (per screening) Program Implementation Costs Contingencies (per screening) (25%)								
3 Wayside Protection System Electrification Items 1 Traction Power supply 2 Traction Power Distribution Program Implementation Costs (per screening) Program Implementation Costs Contingencies (per screening) (25%) Mile \$ 1,170,000 Mile \$ 1,485,000 Subtotal ## \$ 1,485,000 **Subtotal ## \$								940,909
Electrification Items 1 Traction Power supply 2 Traction Power Distribution Subtotal Program Implementation Costs (per screening) Program Implementation Costs Contingencies (per screening) (25%) Mile \$ 1,170,000 Mile \$ 1,485,000 Subtotal Program Implementation Costs (per screening) \$ 1								245,455
1 Traction Power supply 2 Traction Power Distribution Subtotal Program Implementation Costs (per screening) Program Implementation Costs Contingencies (per screening) (25%) Mile \$ 1,170,000	3 wayside Protection System	wille	φ 108,000			0.45	Þ	49,091
1 Traction Power supply 2 Traction Power Distribution Subtotal Program Implementation Costs (per screening) Program Implementation Costs Contingencies (per screening) (25%) Mile \$ 1,170,000	Electrification Items						ĺ	
Subtotal \$ 19 Program Implementation Costs (per screening) Program Implementation Costs Contingencies (per screening) (25%) \$ 3000	1 Traction Power supply	Mile				0.45	\$	531,818
Program Implementation Costs (per screening) Program Implementation Costs Contingencies (per screening) (25%) \$ *** **The program Implementation Costs (per screening) (25%)		Mile	\$ 1,485,000			0.45		675,000
Program Implementation Costs Contingencies (per screening) (25%) \$ **The contingencies of the continue of the cont								19,929,824
Contingencies (per screening) (25%)							\$	5,082,105
	Togram implementation Costs							
	Contingencies (per screening) (25%)						\$	4,982,456
Subtotal							L	
	Subtotal						\$	29,994,385

Subtotal (Rounded) \$ 30,000,000

	4A (0.7 miles) 4B1 (1.3 mi				4B2 (3.4 miles)		
Subsection 4	Berm	Berm	Aerial Viaduct	At Grade	Open Trench/Tunnel	Covered Trench/Tunnel	Deep Tunnel (HST Only)
Capital Cost (\$2009 in Millions) does not include ROW	\$40	\$105	\$ 326 <u>418</u> (4 tracks)	\$124 (4 tracks) \$28 (2 tracks)	\$ 682 <u>644</u> (4 tracks)	\$1,637 (4 tracks)	\$1,502 (2 tracks)
Acquisition Cost of Permanent ROW	Medium	Medium	Medium	Highest	Lowest	Lowest	Lowest
Notes:		 Caltrain Hillsdale Station. New 28th Ave extension 	4 tracks - 1. Raise Ralston Ave, Harbor Blvd, F St, and Holly St to smooth profile; 2. Caltrain Belmont and San Carlos stations;	and San Carlos stations. 2 tracks - 1. Electrification	Harbor Blvd, F St, and Holly St to smooth profile; 2. Caltrain Belmont	smooth profile; 2. Caltrain Belmont and San Carlos stations;	2 tracks - 1. This option would leave existing Caltrain unchanged because subsection already grade separated. 2. Must be combined with 2 track at grade option.

		4C (1.6	o miles)				4D (0.6 miles)		
Subsection 4	Aerial Viaduct	Open Trench	Covered Trench/Tunnel	Deep Tunnel (HST Only)	Aerial Viaduct (HST Only)	At Grade (Caltrain Only)	Open Trench (HST Only)	Covered Trench/Tunnel (HST Only)	Deep Tunnel (HST Only)
Capital Cost (\$2009 in Millions) does not include ROW	\$ 157 <u>200</u> (4 tracks); \$ 111 <u>145</u> (2 tracks)	\$ 325 <u>308</u> (4 tracks)	\$765 (4 tracks)	\$336 (2 tracks)	\$ 30	\$7 (2 tracks)	\$ 105	\$152 (2 tracks)	\$121 (2 tracks)
Acquisition Cost of Permanent ROW	Medium	Medium	Lowest	Lowest	Medium	Highest	Medium	Lowest	Lowest
Notes:	(costs not included). 2 tracks - 1. Caltrain Redwood City Station. 2. Potential HST Redwood City station	4 tracks - 1. Caltrain Redwood City Station. 2. Potential HST Redwood City station (costs not included). 3. Raise Jefferson Ave to smooth profile.	City Station. 2. Potential HST Redwood City station	2 tracks - 1. No potential HST Redwood City station. 2. Two tracks only. 3. Must be combined with 2 track aerial viaduct option.	2 tracks - 1. Convert Woodside Road overpass to underpass. 2. Two tracks only. 3. Must be combined with 2 track at grade option.	2 tracks - 1. Existing 4-track alignment. 2. Must be combined with 2 track aerial viaduct or trench or tunnel option.		2 tracks - 1. <i>Must be combined</i> with 2 track at grade option.	2 tracks - 1. Must be combined with 2 track aerial viaduct option.

COST ELE	MENTS	UNIT	UNIT PRICE		Berm (4 t	tracks)	
Subsection 4			Base: 2009 (3rd	Start: 1164 + 00	A End: 1200 + 00	186.0	Miles
			Quarter)	Start: 11011 00	E11a: 1200 1 00	0.001	VIIICS
ubsection Details						Quant.	Cost
ouble Track At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles	
Oouble Track Elevated (Mile)				Start: 0 + 00		0.00 Miles 0.00 Miles	
Oouble Track Tunnel (Mile)				Start: 0 + 00 Start: 0 + 00		0.00 Miles	
Double Track Trench (Mile) Four Track Construction/Reconstruction A	t Crado (Milo)			Start: 1164 + 00	End: 1182 + 00	0.34 Miles	
our Track Construction/Reconstruction/ our Track Elevated (Mile)	it-Grade (Mile)			Start: 1182 + 00	End: 1182 + 00 End: 1200 + 00	0.34 Miles	
our Track Lievaled (Mile)				Start: 0 + 00	L11u. 1200 + 00	0.00 Miles	
our Track Turner (Mile)				Start: 0 + 00		0.00 Miles	
Double Track Section - Total				Starti 6 + 66		0.00 1111100	
1 Double Track Section - At Grade		Mile	\$ 2,100,224			0.00	\$
2 Double Track Section - On Structure		Mile	\$ 4,700,160			0.00	
3 Double Track Section - In Tunnel or Sub	/ay	Mile	\$ 4,700,160			0.00	\$
4 Double Track Section - In Trench		Mile	\$ 4,700,160			0.00	\$
Four Track Section - Total							
Four-track Section - At Grade		Mile	\$ 4,200,448			0.34	
Four-Track Section - On Structure		Mile	\$ 9,400,320			0.34	\$ 3,204
Four-Track Section - In Tunnel or Subwa	l	Mile	\$ 9,400,320			0.00	-
Four-Track Section - In Trench		Mile	\$ 9,400,320			0.00	\$
Single Track - Total							
5 Single Track Section - At Grade		Mile	\$ 1,549,312			0.00	
Single Track Section - On structure		Mile	\$ 2,350,080			0.00	-
Single Track Section - In Tunnel or Subw	ay	Mile	\$ 2,350,080			0.00	
Single Track Section - In Trench		Mile	\$ 2,350,080			0.00	\$
Feet-by Decible Treed. At Cond-		N 4:1-	¢ 2.020.552			0.00	•
Freight Double Track - At Grade Freight Single Track - At Grade		Mile	\$ 2,839,552			0.00	
Freight Single Hack - At Grade		Mile	\$ 1,549,312			0.00	\$
Earthwork Items							
		Acro	¢ 0.214			12.88	¢ 110
Site Preparation - Undeveloped		Acre	\$ 9,216				
Total Cut Total Fill		CY CY	\$ 6.00 \$ 6.00			0.00	
						133333.33	-
Borrow		CY	\$ 13.00			133333.33	
5 Spoil		CY	\$ 13.00 \$ 6,144			0.00 12.88	
6 Landscape erosion Control 7 Security Fencing (Both sides of ROW)		Acre Mile	\$ 144,384			0.68	-
B Special Drainage Facilities		5% Eart				0.00	\$ 141
o Special Draillage Facilities		3% Edit	I IWO K				\$ 141
Structures, Tunnels, Walls							
1 Standard Structure (2 tracks)		Mile	\$ 34,972,672			0.34	\$ 11,922
2 High Structure		Mile	\$ 40,424,448				\$
Long Span Structure		Mile	\$ 61,919,232				\$
Waterway Crossing - Primary		Mile	\$ 85,342,208				\$
Waterway Crossing - Secondary (Irrigation	n Canal)	Mile	\$ 92,049,408				\$
Twin Single Track Drill&Blast (<6 Miles)	,	Mile	\$ 142,731,264				\$
Twin Single Track TBM (<6 Miles)			\$ 106,637,312				\$
B Twin Single Track TBM w/3rd Tube (<6 N	liles)	Mile	\$ 176,720,896				\$
Double Track Drill & Blast	•	Mile	\$ 146,887,680			0.00	\$
Double Track Mined (Soft Soil)		Mile	\$ 79,200,000				\$
Double Track TBM (<6 Miles)		Mile	\$ 106,637,312				
Double Track TBM w/3rd Tube (>6 Miles		Mile	\$ 176,720,896				
Seismic Chamber (Drill & Blast/Mined)		ea	\$ 126,205,952				\$
Crossovers		ea	\$ 442,368				\$
Cut & Cover Double Track Tunnel		Mile	\$ 131,246,080			0.00	\$
Trench Long (2 tracks) (<1000 ft)		Mile	\$ 57,524,224			0.00	\$
Trench Long (4 tracks) (1000 + ft)		Mile	\$ 86,286,336				
Trench Short (2 tracks) (<1000 ft)		Mile	\$ 78,843,904				\$
Trench Short (4 tracks) (1000 + ft)		Mile	\$ 118,265,856				
Mechanical & Electrical for Tunnels		Mile	\$ 11,848,704				\$
Retaining Walls		Mile	\$ 8,613,888			0.34	\$ 2,936
Containment Walls		Mile	\$ 5,907,456				\$
Single Track Cut and Cover Subway		Mile	\$ 131,246,080				\$
Four Track Drill & Blast		Mile	\$ 293,775,360				\$
Four Track Mined (Soft Soil)		Mile	\$ 158,400,000				\$
Four Track TBM (<6 Miles)		Mile	\$ 213,274,624				
Four Track TBM w/3rd Tube (>6 Miles)		Mile	\$ 353,441,792				.
Four Track Cut & Cover Tunnel		Mile	\$ 262,492,160			0.00	2
Crada Sanarations							
Grade Separations	ny Hadar 2 Tracks /Hebas		¢ 12.204.252				¢
Roadway Crossing HSR - 4 Lane Roadw		ea	\$ 13,284,352				\$
Roadway Crossing HSR - 4 Lane Roadw		ea	\$ 19,926,528			0	\$
Roadway Crossing HSR - 2 Lane Roadw		ea	\$ 2,759,680				\$
Roadway Crossing HSR - 2 Lane Roadw		ea	\$ 2,029,568				\$
Roadway Crossing HSR - 4 Lane Roadw	ay Over 4 Tracks (Urban)	ea	\$ 3,563,520				\$
Roadway Crossing HSR - 4 Lane Roadw		ea	\$ 3,593,216				\$
Roadway Crossing HSR - 2 Lane Roadw		ea	\$ 2,850,816				\$
6 Roadway Crossing HSR - 2 Lane Roadw	ay Over 2 Tracks (Undeveloped)	ea	\$ 3,171,328				\$
Street Bridging HSR Trench		ea	\$ 1,398,784 \$ 87,040				\$ \$
Minor Crossing Closures		ea	\$ 87,040				

	COST ELEMENTS	UN	IIT	UNIT PRICE		Berm (4	tracks)		
Su	bsection 4		E	Base: 2009 (3rd		Α			
				Quarter)	Start: 1164 + 00	End: 1200 + 00	0.68	Mile	S
Sul	osection Details		!				Quant.		Cost
	uble Track At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		
	uble Track Elevated (Mile)				Start: 0 + 00		0.00 Miles		
	uble Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles		
	uble Track Trench (Mile) ur Track Construction/Reconstruction At-Grade (Mile)				Start: 0 + 00 Start: 1164 + 00	End: 1182 + 00	0.00 Miles 0.34 Miles		
	ur Track Elevated (Mile)				Start: 1182 + 00	End: 1200 + 00	0.34 Miles	1	
	ur Track Elevated (Mile)				Start: 0 + 00	L110. 1200 + 00	0.00 Miles		
	ur Track Trankt (Mile)				Start: 0 + 00		0.00 Miles		
1 00	a ridok frenen (wille)				Start. 0 + 00		0.00 Miles		
	Building Items								
	Intermediate Passenger Stations	Ea		\$ -				\$	-
2	Terminal Passenger Stations	Ea	ch	\$ -				\$	-
	Caltrain Passenger Station - At-Grade	Ea		\$15,000,000				\$	-
	Caltrain Passenger Station - On Structure	Ea		\$15,000,000				\$	-
	Caltrain Passenger Station - In Tunnel or Subway	Ea		\$15,000,000				\$	-
١,	Caltrain Passenger Station - In Trench	Ea		\$15,000,000				\$	-
	Maintenance Facility Parking Structures	Ea		\$ 123,921,884				\$	-
	Parking - Structures Parking - At Grade	spa		\$ - \$ -				\$	-
0	Parking - At Grade	spa	ice	.				Þ	-
	Rail & Utility Relocation								
1	Single Track Relocation (Temporary)	Mile	9	\$ 2,000,896				\$	-
	Single Track Relocation (Permanent)	Mile		\$ 2,000,896				\$	-
	Single Track Removal	Mile		\$ 130,048				\$	-
	Major Utility Relocations - Dense Urban	Mile		\$ 1,548,288				\$	-
	Major Utility Relocations - Urban	Mile	Э	\$ 1,084,416				\$	-
	Major Utility Relocations - Dense Suburban	Mile	9	\$ 775,168				\$	-
	Major Utility Relocations - Suburban	Mile		\$ 464,896				\$	-
8	Major Utility Relocations - Undeveloped	Mile	9	\$ 30,720				\$	-
	ROW (Not Included)								
	ROW required for each segment			A 0.70/.004				•	
	Dense Urban	Acr		\$ 2,786,321				\$	-
	Urban Dense Suburban	Acr		\$ 1,371,510 \$ 908,134				\$	-
	Suburban	Acr		\$ 208,418				\$	-
	Undeveloped	Acr		\$ 3,642				\$	
ľ	ROW required for Temp. Construction Easement	7101		ψ 0,012				\$	_
1	Dense Urban	Acr	e					\$	_
	Urban	Acr						\$	_
	Dense Suburban	Acr						\$	_
4	Suburban	Acr	е					\$	-
5	Undeveloped	Acr	е					\$	-
	Right-of-Way Required for Stations, Maintenance & Parking Facilities								
	Dense Urban	Acr		\$ 2,786,321				\$	-
	Urban	Acr		\$ 1,371,510				\$	-
	Dense Suburban	Acr		\$ 908,134				\$	-
	Suburban Undeveloped	Acr		\$ 208,418 \$ 3,642				\$	-
10	Environmental Mitigation = 3% Line Costs	Acr	е	\$ 3,642				\$	674,003
	Environmental ivilligation – 370 Line Costs							φ	014,003
	System Elements							1	
1	Signaling (ATC)	Mile	9	\$ 2,070,000			0.68 Miles	\$	1,411,364
2	Communications (w/ Fiber Optic Backbone)	Mile		\$ 540,000			0.68 Miles		368,182
3	Wayside Protection System	Mile		\$ 108,000			0.68 Miles		73,636
1									
	Electrification Items							١.	
	Traction Power supply	Mile		\$ 1,170,000			0.68 Miles		797,727
2	Traction Power Distribution	Mile	9	\$ 1,485,000			0.68 Miles		1,012,500
		total						\$	26,804,187
	Program Implementation Costs (per screening) Program Implementation Costs							\$	6,835,068
1	i rogram implementation costs								
1	Contingencies (per screening) (25%)							\$	6,701,047
	ganoloo (por our our mig/ (2070)							*	5,101,011
	Subtotal							\$	40,340,301
Ь	Subtotal (Pounded)				ll	I			40 000 000

Subtotal (Rounded) \$ 40,000,000



COST ELEMENTS	UNIT	UNIT PRICE		Berm (4 tr	racks)			Aerial Viaduc	t (4 tracks)			At-Grade (2	tracks)			At-Grade (4 tracks)	
Subsection 4		Base: 2009 (3rd Quarter)		B1				B2				B2				B)	
		Quarter)	Start: 1200 + 00	Start: 1270 + 00	1.33 M	iles	Start: 1270 + 00	Start: 1450 + 00	3.41 Mil	les	Start: 1270 + 00			Miles	Start: 1270 + 00	End: 1450 + 00		1 Miles
Subsection Details					Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 1270 + 00	End: 1450 + 00	3.41 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile) Double Track Tunnel (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	1	Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	
Double Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 1200 + 00		0.66 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile) Four Track Tunnel (Mile)			Start: 1235 + 00 Start: 0 + 00		0.66 Miles 0.00 Miles		Start: 1270 + 00 Start: 0 + 00	End: 1450 + 00	3.41 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 1270 + 00 Start: 0 + 00	End: 1450 + 00	3.41 Miles 0.00 Miles	
Four Track Trench (Mile)	-		Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Section - Total 1 Double Track Section - At Grade	Mile	\$ 2,100,224			0.00 \$	-			0.00 \$				0.00	\$	_		0.00	\$
2 Double Track Section - On Structure	Mile	\$ 4,700,160			0.00 \$	-			0.00 \$	-			0.00	\$	-		0.00	\$
3 Double Track Section - In Tunnel or Subway 4 Double Track Section - In Trench	Mile Mile	\$ 4,700,160 \$ 4,700,160			0.00 \$ 0.00 \$	-			0.00 \$ 0.00 \$	-			0.00		-		0.00 0.00	
4 Double Hack Section - III Helich	IVIIIC	4,700,100			0.00	-			0.00 \$	_			0.00	\$			0.00	Ψ
Four Track Section - Total						0.704.000												
Four-track Section - At Grade Four-Track Section - On Structure	Mile Mile	\$ 4,200,448 \$ 9,400,320			0.66 \$ 0.66 \$	2,784,388 6,231,273			0.00 \$ 3.41 \$	32.046.545			0.00 0.00		-		0.00 3.41	\$ 32,046,545
Four-Track Section - In Tunnel or Subway	Mile	\$ 9,400,320			0.00 \$	-			0.00 \$	-			0.00	\$	-		0.00	\$
Four-Track Section - In Trench	Mile	\$ 9,400,320			0.00 \$	-			0.00 \$	-			0.00	\$	-		0.00	\$
Single Track - Total																		
5 Single Track Section - At Grade	Mile	\$ 1,549,312			0.00 \$	-			0.00 \$	-			0.00		-		0.00	
6 Single Track Section - On structure 7 Single Track Section - In Tunnel or Subway	Mile Mile	\$ 2,350,080 \$ 2,350,080			0.00 \$ 0.00 \$	-			0.00 \$ 0.00 \$	-			0.00		-		0.00 0.00	
8 Single Track Section - In Trench	Mile	\$ 2,350,080			0.00 \$	-			0.00 \$	-			0.00		-		0.00	\$
OFFish Post In Trade At Code		¢ 0.000 F50			2 22 4				0.00				0.00				0.00	.
9 Freight Double Track - At Grade 10 Freight Single Track - At Grade	Mile Mile	\$ 2,839,552 \$ 1,549,312			0.00 \$ 0.00 \$	-			0.00 \$ 0.00 \$	-			0.00 0.00		-		0.00 0.00	
To Frogrico Ingle Hack At Grade	IVIIIC	Ψ 1,017,012			0.00				0.00				0.00	•			0.00	*
Earthwork Items		¢ 0.21/			0.00				0.00				0.00	•			0.00	Φ.
1 Site Preparation - Undeveloped 2 Total Cut	Acre CY	\$ 9,216 \$ 6.00			0.00 \$ 0.00 \$	-			0.00 \$ 0.00 \$	-			0.00 0.00		-		0.00 0.00	\$ \$
3 Total Fill	CY	\$ 6.00			259259.26 \$	1,555,556			0.00 \$	-			0.00	\$	-		0.00	\$ -
4 Borrow 5 Spoil	CY	\$ 13.00 \$ 13.00			259259.26 \$ 0.00 \$	3,370,370			0.00 \$ 0.00 \$	-			0.00 0.00		-		0.00 0.00	
6 Landscape erosion Control	Acre	\$ 6,144			0.00 \$				0.00 \$	-			0.00		-		0.00	\$
7 Security Fencing (Both sides of ROW)	Mile	\$ 144,384			0.66 \$	95,709			0.00 \$	-			0.00		-		0.00	\$ -
8 Special Drainage Facilities	5% Eart	hwork I			\$	251,082			\$	-				\$	-			\$ -
Structures, Tunnels, Walls																		
1 Standard Structure (2 tracks)	Mile	\$ 34,972,672			0.66 \$	23,182,642			0.00 \$				0.00	\$	-			\$
Standard Structure (4 tracks) 2 High Structure	Mile Mile	\$ 52,459,008 \$ 40,424,448			\$	_			3.41 \$	178,837,527				\$	_			\$
3 Long Span Structure	Mile	\$ 61,919,232			\$	-			\$	-				\$	-			\$
4 Waterway Crossing - Primary	Mile	\$ 85,342,208			\$	-								•				Φ.
5 Waterway Crossing - Secondary (Irrigation Canal) 6 Twin Single Track Drill&Blast (<6 Miles)	Mile Mile	\$ 92,049,408 \$ 142,731,264			\$	-			\$	-				\$	-			\$
7 Twin Single Track TBM (<6 Miles)	Mile	\$ 106,637,312			\$	-			\$	-				\$	-			\$
8 Twin Single Track TBM w/3rd Tube (<6 Miles) 9 Double Track Drill & Blast	Mile Mile	\$ 176,720,896 \$ 146,887,680			0.00 \$	-			0.00 \$	-			0.00	\$	-		0.00	\$
10 Double Track Mined (Soft Soil)	Mile	\$ 792,000,000			\$	-			\$	-			0.00	\$	-		0.00	\$
Double Track TBM (<6 Miles)	Mile	\$ 106,637,312							ľ									
Double Track TBM w/3rd Tube (>6 Miles) 11 Seismic Chamber (Drill & Blast/Mined)	Mile ea	\$ 176,720,896 \$ 126,205,952			•	_			\$	_				\$				\$
12 Crossovers	ea	\$ 442,368			\$	-			\$	-				\$	-			\$
13 Cut & Cover Double Track Tunnel	Mile	\$ 131,246,080			0.00 \$ 0.00 \$	-			0.00 \$ 0.00 \$	-			0.00		-		0.00	\$
14 Trench Long (2 tracks) (<1000 ft) Trench Long (4 tracks) (1000 + ft)	Mile Mile	\$ 57,524,224 \$ 86,286,336			0.00 \$	-			0.00 \$	-			0.00	\$	-		0.00	•
15 Trench Short (2 tracks) (<1000 ft)	Mile	\$ 78,843,904			\$	-			\$	-				\$	-			\$
Trench Short (4 tracks) (1000 + ft) 16 Mechanical & Electrical for Tunnels	Mile Mile	\$ 118,265,856 \$ 11,848,704			¢				¢					\$				\$
17 Retaining Walls	Mile	\$ 8,613,888			0.66 \$	5,709,964			0.00 \$	-			0.00	\$	-		0.00	\$
18 Containment Walls	Mile	\$ 5,907,456			\$	-			\$	-				\$	-			\$
19 Single Track Cut and Cover Subway Four Track Drill & Blast	Mile Mile	\$ 131,246,080 \$ 293,775,360			\$ \$	-			\$	-				\$	-			\$
Four Track Mined (Soft Soil)	Mile	\$ 1,584,000,000			\$	-			\$	-				\$	-			\$
Four Track TBM (<6 Miles)	Mile Mile	\$ 213,274,624 \$ 353,441,792																
Four Track TBM w/3rd Tube (>6 Miles) Four Track Cut & Cover Tunnel	Mile	\$ 353,441,792 \$ 262,492,160			0.00 \$	-			0.00 \$	-			0.00	\$	-		0.00	\$
					*								2,00					
Grade Separations 1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$ 13,284,352			¢				· ·					\$				\$
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$ 19,926,528			0 \$	-			0 \$	-			0	\$	-		0	\$
2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$ 2,759,680			1 \$	2,759,680			4 \$	11,038,720				\$	-			\$
3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) 4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea ea	\$ 2,029,568 \$ 3,563,520			\$	-			\$	-				\$	-			\$ \$
5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$ 3,593,216			\$	-			\$	-				\$	-			\$
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 2,850,816			\$	-			\$	-				\$	-			\$ -
6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$ 3,171,328	I	ı İ	\$	-	I	I	>	-	1 1	l I		→	- I	I	ı	•

COST ELEMENTS	U	JNIT UN	IT PRICE		Berm (4	4 tracks)			Aerial Viaduct	t (4 tracks)			At-Grade (2	tracks)			At-Grade ((4 tracks)	
Subsection 4			: 2009 (3rd		-	11			D0				D0				DC		
		Q	luarter)	Start: 1200 + 00	Start: 1270 + 00		33 Miles	Start: 1270 + 00	B2 Start: 1450 + 00	2 //	1 Miles	Start: 1270 + 00	B2 End: 1450 + 00	2 /1	Miles	Start: 1270 + 00	B2 End: 1450 + 00	2 3.41 Mi	iles
				Start. 1200 + 00	Start. 1270 + 00	Lix	33 Miles	Start. 1270 + 00	Start. 1450 + 00	3.4	i ivilles	Start. 1270 + 00	L110. 1430 + 00	3.41	Willes	3tart. 1270 + 00	L11u. 1430 + 00	3.41 WI	lies
Subsection Details			_			Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile)				Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 1270 + 00	End: 1450 + 00	3.41 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Tunnel (Mile) Double Track Trench (Mile)				Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	-	Start: 0 + 00 Start: 0 + 00		0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)				Start: 1200 + 00	End: 1235 + 00	0.66 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile)				Start: 1235 + 00	End: 1270 + 00	0.66 Miles		Start: 1270 + 00	End: 1450 + 00	3.41 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1270 + 00	End: 1450 + 00	3.41 Miles	
Four Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Trench (Mile)			1 200 704	Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
7 Street Bridging HSR Trench 8 Minor Crossing Closures	ea		1,398,784 87,040				\$ -								\$ -			\$	-
olivinor crossing closures	60	a ş	07,040				-				p -				-			•	-
Building Items																			
1 Intermediate Passenger Stations		Each \$	-				\$ -				-				\$ -			\$	-
2 Terminal Passenger Stations		Each \$	-				-				-				-			\$	-
Caltrain Passenger Station - At-Grade Caltrain Passenger Station - On Structure			315,000,000 315,000,000			1	\$ - \$ 15,000,000			1	30,000,000			0	\$ -			2 \$	30,000,000
2 Caltrain Passenger Station - On Structure 2 Caltrain Passenger Station - In Tunnel or Subway			315,000,000 315,000,000			'	\$ 15,000,000			4	, 30,000,000 } _				\$ -			\$	-
Caltrain Passenger Station - In Trench	E	Each \$	315,000,000 315,000,000				\$ -				-				\$ -			\$	-]
3 Maintenance Facility	E	Each \$ 1	23,921,884				\$ -				-				\$ -			\$	-
4 Parking - Structures		pace \$	-				-				-				-			\$	-
5 Parking - At Grade	sp	pace \$	-				\$ -				-				\$ -			\$	-
Rail & Utility Relocation																			
1 Single Track Relocation (Temporary)	Mi	file \$	2,000,896				\$ -				- l				\$ -			\$	-
2 Single Track Relocation (Permanent)	Mi	file \$	2,000,896				\$ -				-				\$ -			\$	-
3 Single Track Removal		file \$	130,048				\$ -				-				\$ -			\$	-
4 Major Utility Relocations - Dense Urban		file \$	1,548,288				-				-				\$ -			\$	-
5 Major Utility Relocations - Urban 6 Major Utility Relocations - Dense Suburban		file \$	1,084,416 775,168								-				\$ -			\$	-
7 Major Utility Relocations - Suburban		file \$	464,896				\$ -								\$ -			\$	-
8 Major Utility Relocations - Undeveloped		file \$	30,720				\$ -				-				\$ -			\$	-
ROW (Not Included)																			
ROW required for each segment 1 Dense Urban	٨	cre \$	2,786,321				¢ .								\$			•	
2 Urban		cre \$	1,371,510				\$ -								\$ -			\$	-
3 Dense Suburban		cre \$	908,134				\$ -				-				\$ -			\$	-
4 Suburban		cre \$	208,418				\$ -				-				\$ -			\$	-
5 Undeveloped	Ac	cre \$	3,642				-				-				-			\$	-
ROW required for Temp. Construction Easement 1 Dense Urban	٨	cre					\$ -								\$ - R			\$ R	-
2 Urban		cre					\$ -				-				\$ -			\$	_
3 Dense Suburban		cre					\$ -				-				\$ -			\$	-
4 Suburban		cre					\$ -			:	-				\$ -			\$	-
5 Undeveloped	Ad	cre					-			:	-				-			\$	-
Right-of-Way Required for Stations, Maintenance & Parking Facilities 6 Dense Urban	Λ.	cre \$	2,786,321				\$				\$				\$			•	
7 Urban		cre \$	1,371,510				\$ -				-				\$ -			\$	
8 Dense Suburban	Ad	cre \$	908,134				\$ -				-				\$ -			\$	-
9 Suburban		cre \$	208,418				-				-				-			\$	-
10 Undeveloped Environmental Mitigation = 3% Line Costs	Ad	cre \$	3,642				\$ 1,000,000				7 5 5 7 5 5 7 5 5 7 5 5 7 5 5 7 5 5 7 5 5 7 5 5 7 5 5 7				- 0			\$	1 041 204
Environmental willigation = 5% Line COSIS							\$ 1,828,220				\$ 7,557,684				-				1,861,396
System Elements																			
1 Signaling (ATC)		file \$	2,070,000			1.33	\$ 2,744,318			3.41	7,056,818			3.41	\$ 7,056,818			3.41 \$	7,056,818
2 Communications (w/ Fiber Optic Backbone)		file \$	540,000			1.33	\$ 715,909			3.41	\$ 1,840,909			3.41	\$ 1,840,909			3.41 \$	1,840,909
3 Wayside Protection System	Mi	file \$	108,000			1.33	\$ 143,182			3.41	\$ 368,182			3.41	\$ 368,182			3.41 \$	368,182
Electrification Items																			
1 Traction Power supply	Мі	file \$	1,170,000			1.33	\$ 1,551,136			3.41	3,988,636			3.41	\$ 3,988,636			3.41 \$	3,988,636
2 Traction Power Distribution		lile \$	1,485,000			1.33	\$ 1,968,750			3.41	5,062,500			3.41	\$ 5,062,500			3.41 \$	5,062,500
	ubtotal						\$ 69,892,179				277,797,522				\$ 18,317,045			\$	82,224,987
Program Implementation Costs (per screening)							\$ 17,822,506				70,838,368				\$ 4,670,847			\$	20,967,372
Program Implementation Costs																			
Contingencies (per screening) (25%)							\$ 17,473,045				69,449,380				\$ 4,579,261			\$	20,556,247
							, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				. 37,117,000				1,077,201				25,550,211
Subtotal							\$ 105,187,729				\$ 418,085,271		· · · · · ·		\$ 27,567,153			\$	123,748,606
Culatata /Daywada al\					II		¢ 105 000 000								¢ 20,000,000			L	104.000.000

COST ELEMENTS	UNIT	UNIT PRICE		Open Trer	nch (4 tracks)			Cover	red Trench			Tunnel	(HST only)	
Subsection 4		Base: 2009 (3rd Quarter)			B2				B2				B2	
		Qual (el)	Start: 1270 + 00	Start: 1450 + 00		Miles	Start: 1270 + 00	Start: 1450 + 00	3.41	Miles	Start: 1270 + 00	Start: 1450 + 00	3.41 Mil	es
Subsection Details					Quant.	Cost			Quant.	Cost	1		Quant.	Cost
Double Track At-Grade (Mile)			Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 0 + 00	Start: 0 + 00	0.00 Miles	
Double Track Elevated (Mile) Double Track Tunnel (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 1270 + 00	End: 1450 + 00	0.00 Miles 3.41 Miles	
Double Track Trench (Mile)			Start: 0 + 00	E 1.0	0.00 Miles		Start: 0 + 00	E 1.0	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile) Four Track Elevated (Mile)			Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00 End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00 End: 0 + 00	0.00 Miles 0.00 Miles	
Four Track Tunnel (Mile)			Start: 0 + 00	F	0.00 Miles		Start: 1270 + 00	End: 1450 + 00	3.41 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Trench (Mile) Double Track Section - Total			Start: 1270 + 00	End: 1450 + 00	3.41 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
1 Double Track Section - At Grade	Mile	\$ 2,100,224			0.00				0.00				0.00 \$	-
2 Double Track Section - On Structure 3 Double Track Section - In Tunnel or Subway	Mile Mile	\$ 4,700,160 \$ 4,700,160			0.00 0.00				0.00 0.00				0.00 \$ 3.41 \$	- 16,023,273
4 Double Track Section - In Trench	Mile	\$ 4,700,160			0.00	\$ -			0.00	\$ -			0.00 \$	-
Four Track Section - Total														
Four-track Section - At Grade Four-Track Section - On Structure	Mile Mile	\$ 4,200,448 \$ 9,400,320			0.00	\$ - \$ -			0.00 0.00				0.00 \$ 0.00 \$	-
Four-Track Section - In Tunnel or Subway	Mile	\$ 9,400,320				\$ -			3.41				0.00[\$	-
Four-Track Section - In Trench	Mile	\$ 9,400,320			3.41	\$ 32,046,545			0	\$ -			0 \$	-
Single Track - Total														
5 Single Track Section - At Grade 6 Single Track Section - On structure	Mile Mile	\$ 1,549,312 \$ 2,350,080				\$ - \$ -			0				0 \$ 0 \$	-
7 Single Track Section - On Studedule	Mile	\$ 2,350,080			-	\$ -			0				0 \$	-
8 Single Track Section - In Trench	Mile	\$ 2,350,080			0	\$ -			0	\$ -			0 \$	-
9 Freight Double Track - At Grade	Mile	\$ 2,839,552			-	\$ -			0	\$ -			0 \$	-
10 Freight Single Track - At Grade	Mile	\$ 1,549,312			0	\$ -			0	\$ -			0 \$	-
Earthwork Items														
1 Site Preparation - Undeveloped 2 Total Cut	Acre CY	\$ 9,216 \$ 6.00			45.45 1466666.67				45.45 1466666.67				0.00 \$ 0.00 \$	-
3 Total Fill	CY	\$ 6.00			0.00	\$ -				\$ -			0.00 \$	-
4 Borrow 5 Spoil	CY	\$ 13.00 \$ 13.00			0.00 1466666.67				0.00 1466666.67				0.00 \$ 0.00 \$	-
6 Landscape erosion Control	Acre	\$ 6,144			45.45	\$ 279,273			45.45	\$ 279,273			0.00 \$	-
7 Security Fencing (Both sides of ROW) 8 Special Drainage Facilities	Mile 5% Ear	\$ 144,384			3.41	\$ 492,218 \$ 1,452,853			0.00	\$ - \$ 1,428,242			0.00 \$	-
	070 Ed.					1,102,000				· / / / / / / / / / / / / / / / / / / /				
Structures, Tunnels, Walls 1 Standard Structure (2 tracks)	Mile	\$ 34,972,672			0.00	\$ -			0.00	\$ -			0.00 \$	-
Standard Structure (4 tracks)	Mile	\$ 52,459,008								•				
2 High Structure 3 Long Span Structure	Mile Mile	\$ 40,424,448 \$ 61,919,232				\$ -				\$ - \$ -			\$	-
4 Waterway Crossing - Primary	Mile	\$ 85,342,208				\$ -				-			\$	-
5 Waterway Crossing - Secondary (Irrigation Canal) 6 Twin Single Track Drill&Blast (<6 Miles)	Mile Mile	\$ 92,049,408 \$ 142,731,264				\$ -				\$ - \$ -			\$	-
7 Twin Single Track TBM (<6 Miles) 8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$ 106,637,312				\$ -				\$ -			\$	-
9 Double Track Drill & Blast	Mile Mile	\$ 176,720,896 \$ 146,887,680			0.00	\$ - \$ -			0.00	*			0.00 \$	-
10 Double Track Mined (Soft Soil)	Mile	\$ 792,000,000				\$ -				\$ -			0.76 \$ 2.65 \$	601,200,000
Double Track TBM (<6 Miles) Double Track TBM w/3rd Tube (>6 Miles)	Mile Mile	\$ 106,637,312 \$ 176,720,896											2.65 \$	282,588,877
11 Seismic Chamber (Drill & Blast/Mined) 12 Crossovers	ea	\$ 126,205,952 \$ 442,368				\$ -				\$ -			\$	-
13 Cut & Cover Double Track Tunnel	ea Mile	\$ 131,246,080			0.00				0.00	\$ -			0.00 \$	-
14 Trench Long (2 tracks) (<1000 ft) Trench Long (4 tracks) (1000 + ft)	Mile Mile	\$ 57,524,224 \$ 86,286,336			0.00 3.41	\$ - \$ 294,157,964			0.00	\$ -			0.00 \$	-
15 Trench Short (2 tracks) (<1000 ft)	Mile	\$ 78,843,904			3.41	\$ 274,137,704				\$ -			\$	-
Trench Short (4 tracks) (1000 + ft) 16 Mechanical & Electrical for Tunnels	Mile Mile	\$ 118,265,856 \$ 11,848,704				\$			3.41	\$ 40,393,309			3.41 \$	40,393,309
17 Retaining Walls	Mile	\$ 8,613,888			0.00				0.00				0.00 \$	+0,573,307
18 Containment Walls 19 Single Track Cut and Cover Subway	Mile Mile	\$ 5,907,456 \$ 131,246,080			0.00	\$ -				\$ - \$			\$	-
Four Track Drill & Blast	Mile	\$ 293,775,360				\$ -				\$ -			\$	-
Four Track Mined (Soft Soil) Four Track TBM (<6 Miles)	Mile Mile	\$ 1,584,000,000 \$ 213,274,624				\$ -				\$ -			0.00 \$	
Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 353,441,792											\$	-
Four Track Cut & Cover Tunnel	Mile	\$ 262,492,160			0.00	\$ -			3.41	\$ 894,859,636			0.00 \$	-
Grade Separations														
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea ea	\$ 13,284,352 \$ 19,926,528				\$ - \$ -				\$ - \$ -			\$	-
2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$ 2,759,680			4	\$ 11,038,720			4	\$ 11,038,720			4 \$	11,038,720
3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) 4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea ea	\$ 2,029,568 \$ 3,563,520				\$ -				\$ - \$ -			\$	-
5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$ 3,593,216				\$ -				\$ -			\$	-
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban) 6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea ea	\$ 2,850,816 \$ 3,171,328				\$ - \$ -				\$ - \$ -			\$	-
ophodoway Grossing Fisht - 2 Lane Rodoway Over 2 Hacks (United 810) Peu	ea	I Ψ 3,1/1,320	I	I	I	ΙΨ -		Į	ı l	Ψ -	I	I	Ι Ι ⊅	-

COST ELEMENTS	UNIT	UNIT PRICE		Open Trend	ch (4 tracks)			Cover	ed Trench			Tunnel	(HST only)	
Subsection 4		Base: 2009 (3rd		-	10				D2				D2	
		Quarter)	Start: 1270 + 00	Start: 1450 + 00	32	1 Miles	Start: 1270 + 00	Start: 1/50 + 00	B2 3.4°	Milne	Start: 1270 + 00	Start: 1450 + 00	B2	Miles
			Start. 1270 + 00	Start. 1430 + 00	3.4	1 Miles	Start. 1270 + 00	Start. 1450 + 00	3.4	WIIIeS	Start. 1270 + 00	Start. 1450 + 00	3.41	Willes
Subsection Details		•			Quant.	Cost			Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile)			Start: 0 + 00	Start: 0 + 00	0.00 Miles	4	Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 0 + 00	Start: 0 + 00	0.00 Miles	
Double Track Elevated (Mile) Double Track Tunnel (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	4	Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 1270 + 00	End: 1450 + 00	0.00 Miles 3.41 Miles	
Double Track Tunner (Mile)			Start: 0 + 00		0.00 Miles	-	Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Tunnel (Mile)			Start: 0 + 00	F	0.00 Miles	4	Start: 1270 + 00	End: 1450 + 00	3.41 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Trench (Mile) 7 Street Bridging HSR Trench	ea	\$ 1,398,784	Start: 1270 + 00	End: 1450 + 00	3.41 Miles	0 \$ -	Start: 0 + 00		0.00 Miles	\$ -	Start: 0 + 00		0.00 Miles	\$ -
8 Minor Crossing Closures	ea	\$ 87,040				-			0				0	\$ -
Building Items														
1 Intermediate Passenger Stations 2 Terminal Passenger Stations	Each Each					-				\$ -				\$ -
Caltrain Passenger Station - At-Grade	Each	\$15,000,000				\$ -				\$ - \$				\$ - \$
Caltrain Passenger Station - On Structure	Each					\$ -				\$ -				\$ -
2 Caltrain Passenger Station - In Tunnel or Subway	Each	\$15,000,000				\$ -				\$ -			0	\$ -
Caltrain Passenger Station - In Trench	Each				:	2 \$ 30,000,000			2	\$ 30,000,000			0	\$ -
3 Maintenance Facility	Each					\$ -				\$ -				\$ -
4 Parking - Structures 5 Parking - At Grade	space space					\$ -				\$ -				\$ - ¢
SIT diking - At Orace	space					_				-				-
Rail & Utility Relocation														
1 Single Track Relocation (Temporary)	Mile	\$ 2,000,896				\$ -				\$ -				\$ -
2 Single Track Relocation (Permanent)	Mile	\$ 2,000,896				\$ -				-				-
3 Single Track Removal 4 Major Utility Relocations - Dense Urban	Mile Mile	\$ 130,048 \$ 1,548,288				\$ -				\$ -				-
5 Major Utility Relocations - Urban	Mile	\$ 1,084,416				\$				\$ - \$				\$ -
6 Major Utility Relocations - Dense Suburban	Mile	\$ 775,168				-				\$ -				\$ -
7 Major Utility Relocations - Suburban	Mile	\$ 464,896				\$ -				\$ -				\$ -
8 Major Utility Relocations - Undeveloped	Mile	\$ 30,720				\$ -				\$ -				\$ -
DOWALL LA LA														
ROW (Not Included) ROW required for each segment														
1 Dense Urban	Acre	\$ 2,786,321				\$ -				\$ -				\$ -
2 Urban	Acre	\$ 1,371,510				-				\$ -				\$ -
3 Dense Suburban	Acre	\$ 908,134				\$ -				\$ -				\$ -
4 Suburban	Acre	\$ 208,418				-				\$ -				-
5 Undeveloped ROW required for Temp. Construction Easement	Acre	\$ 3,642				-				\$ -				-
1 Dense Urban	Acre					\$ -				\$ - \$				\$ - \$
2 Urban	Acre					-				\$ -				\$ -
3 Dense Suburban	Acre					\$ -				\$ -				\$ -
4 Suburban	Acre					\$ -				\$ -				\$ -
5 Undeveloped	Acre					-				\$ -				\$ -
Right-of-Way Required for Stations, Maintenance & Parking Facilities 6 Dense Urban	Acre	\$ 2,786,321				\$				\$				\$
7 Urban	Acre	\$ 1,371,510				\$ -				\$ -				\$ -
8 Dense Suburban	Acre	\$ 908,134				\$ -				\$ -				\$ -
9 Suburban	Acre	\$ 208,418				\$ -				\$ -				\$ -
10 Undeveloped	Acre	\$ 3,642				\$ -				\$ -				\$ -
Environmental Mitigation = 3% Line Costs						\$ 11,932,594				\$ 31,149,939				\$ 28,537,325
System Elements						1								
1 Signaling (ATC)	Mile	\$ 2,070,000			3.4				3.41				3.41	
2 Communications (w/ Fiber Optic Backbone)	Mile	\$ 540,000			3.4	1 \$ 1,840,909			3.41	\$ 1,840,909			3.41	\$ 1,840,909
3 Wayside Protection System	Mile	\$ 108,000			3.4	1 \$ 368,182			3.41	\$ 368,182			3.41	\$ 368,182
Electrification Items						1								
1 Traction Power supply	Mile	\$ 1,170,000			3.4	1 \$ 3,988,636			3.41	\$ 3,988,636			3.41	\$ 3,988,636
2 Traction Power Distribution	Mile	\$ 1,485,000			3.4				3.41				3.41	
Su	ototal					\$ 428,002,789				\$ 1,087,798,286				\$ 998,098,549
Program Implementation Costs (per screening)						\$ 109,140,711				\$ 277,388,563				\$ 254,515,130
Program Implementation Costs						1								
Contingencies (per screening) (25%)						\$ 107,000,697				\$ 271,949,572				\$ 249,524,637
Contingencies (per screening) (2970)						Ψ 107,000,097				Ψ 211,747,312				Ψ 247,024,037
Subtotal	1	1	-			\$ 644,144,197		1		\$ 1,637,136,421				\$ 1,502,138,317
Subtotal (Pounded)						\$ 644,000,000				\$ 1,637,130,421	l			\$ 1 502,000,000

COST ELEMENTS	UNIT	UNIT PRICE		Aerial Viaduct	(4 Tracks)		Aerial Viaduc	t (2 Tracks)		Open Trench	n (4 tracks)			Covered	d Trench	-
Subsection 4		Base: 2009 (3rd		^	· · · · · ·		^	· · ·							2	
		Quarter)	Start: 1450 + 00	Start: 1533 + 00	1.5	7 Miles	Start: 1450 + 00 Start: 1533 + 00	15	7 Miles	Start: 1450 + 00 Start: 1533 + 00	1	57 Miles	Start: 1450 + 00	Start: 1533 + 00	1.57	Miles
				1000 1 00			Start 1000 1 00			Start 1000 1 00	1.		,	1000 1 00	1.37	
Subsection Details Double Track At-Grade (Mile)			Start: 0 + 00	Start: 0 + 00	Quant.	Cost	Start: 0 + 00	Quant.	Cost	Start: 0 + 00	Quant.	Cost	Start. 0 - 00	Start: 0 + 00	Quant.	Cost
Double Track At-Grade (Mile) Double Track Elevated (Mile)			Start: 0 + 00 Start: 0 + 00	Start: U + UU	0.00 Miles		Start: 0 + 00 Start: 0 + 00 Start: 1450 + 00 End: 1533 + 00	1.57 Miles		Start: 0 + 00 Start: 0 + 00 Start: 0 + 00	0.00 Miles		Start: 0 + 00 Start: 0 + 00	Start: 0 + 00	0.00 Miles	
Double Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Trench (Mile) Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00 Start: 0 + 00 End: 0 + 00	0.00 Miles		Start: 0 + 00 Start: 0 + 00 End: 0 + 00	0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile)			Start: 1450 + 00	End: 1533 + 00	1.57 Miles		Start: 0 + 00 End: 0 + 00	0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 0 + 00	Liid. 0 + 00	0.00 Miles	
Four Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 1450 + 00	End: 1533 + 00	1.57 Miles	
Four Track Trench (Mile) Double Track Section - Total			Start: 0 + 00	0.00 Miles	0.00 Miles		Start: 0 + 00 0.00 Miles	0.00 Miles		Start: 1450 + 00 End: 1533 + 00	1.57 Miles		Start: 0 + 00		0.00 Miles	
1 Double Track Section - At Grade	Mile	\$ 2,100,224			0.00 \$			0.00	\$ -		0.00	\$ -			0.00 \$	-
2 Double Track Section - On Structure	Mile	\$ 4,700,160			0.00 \$	-		1.57			0.00				0.00 \$	-
3 Double Track Section - In Tunnel or Subway 4 Double Track Section - In Trench	Mile Mile	\$ 4,700,160 \$ 4,700,160			0.00 \$			0.00 \$			0.00 0.00				0.00 \$ 0.00 \$	=
4 Double Hack Section - In Hench	IVIIIC	\$ 4,700,100			0.00 1	-		0.00	.		0.00	Ф			0.00 \$	-
Four Track Section - Total																
Four-track Section - At Grade Four-Track Section - On Structure	Mile Mile	\$ 4,200,448 \$ 9,400,320			0.00 \$ 1.57 \$	14,777,018		0.00 5			0.00	\$ -			0.00 \$	-
Four-Track Section - In Tunnel or Subway	Mile	\$ 9,400,320 \$ 9,400,320			0.00 \$	14,///,018		0.00			0	\$ -			1.57 \$	- 14,777,018
Four-Track Section - In Trench	Mile	\$ 9,400,320			0.00 \$			0.00			1.57	\$ 14,777,018			0 \$	-
Single Track - Total																
Single Track - Total 5 Single Track Section - At Grade	Mile	\$ 1,549,312			0.00 \$			0.00	\$ -		0	\$ -			0 \$	-
6 Single Track Section - On structure	Mile	\$ 2,350,080			0.00 \$	-		0.00	\$ -		0	\$ -			0 \$	-
7 Single Track Section - In Tunnel or Subway 8 Single Track Section - In Trench	Mile Mile	\$ 2,350,080			0.00 \$ 0.00 \$			0.00			0	-			0 \$	-
O Single Hack Section - III Helich	iviile	\$ 2,350,080			0.001	, -		0.00	φ -			φ -			0 \$	-
9 Freight Double Track - At Grade	Mile	\$ 2,839,552			0.00 \$			0.00			0	\$ -			0 \$	-
10 Freight Single Track - At Grade	Mile	\$ 1,549,312			0.00 \$	-		0.00	-		0	-			0 \$	-
Earthwork Items																
1 Site Preparation - Undeveloped	Acre	\$ 9,216			0.00 \$			0.00			20.96				20.96 \$	193,164
2 Total Cut 3 Total Fill	CY	\$ 6.00 \$ 6.00			0.00 \$	-		0.00 \$	\$ -		676296.30				676296.30 \$	4,057,778
4 Borrow	CY	\$ 6.00 \$ 13.00			0.00 \$			0.00			0.00 0.00				0.00 \$	-
5 Spoil	CY	\$ 13.00			0.00 \$	-		0.00	\$ -		676296.30	\$ 8,791,852			676296.30 \$	8,791,852
6 Landscape erosion Control 7 Security Engine (Path sides of DOW)	Acre Mile	\$ 6,144 \$ 144,384			0.00 \$			0.00			20.96				20.96 \$	128,776
7 Security Fencing (Both sides of ROW) 8 Special Drainage Facilities	Mile 5% Eart				0.00 \$	-		0.00	\$ -		1.57	\$ 226,967 \$ 669,927			0.00 \$	658,578
																,
Structures, Tunnels, Walls 1 Standard Structure (2 tracks)	Mile	\$ 34,972,672			0.00	:		1.57	\$ 54,975,981		0.00	¢			0.00 \$	
Standard Structure (2 tracks) Standard Structure (4 tracks)	Mile	\$ 34,972,672 \$ 52,459,008			0.00 \$			1.5/			0.00	φ -			0.00 \$	-
2 High Structure	Mile	\$ 40,424,448			\$	-			\$ -			\$ -			\$	-
3 Long Span Structure 4 Waterway Crossing - Primary	Mile Mile	\$ 61,919,232 \$ 85,342,208			\$	-			\$ -			- •			\$	-
5 Waterway Crossing - Primary 5 Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$ 85,342,208 \$ 92,049,408			\$	-			\$ -			\$ -			\$	-
6 Twin Single Track Drill&Blast (<6 Miles)	Mile	\$ 142,731,264			\$	-			\$ -			\$ -			\$	-
7 Twin Single Track TBM (<6 Miles) 8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile Mile	\$ 106,637,312 \$ 176,720,896			\$	- -			\$ -			- ¢			\$	-
9 Double Track Drill & Blast	Mile	\$ 176,720,896 \$ 146,887,680			0.00 \$, - } -		0.00	φ - \$ -		0.00	\$ -			0.00 \$	-
10 Double Track Mined (Soft Soil)	Mile	\$ 79,200,000			\$	-			\$ -			\$ -			\$	-
Double Track TBM (<6 Miles) Double Track TBM w/3rd Tube (>6 Miles)	Mile Mile	\$ 106,637,312 \$ 176,720,896														
11 Seismic Chamber (Drill & Blast/Mined)	ea	\$ 176,720,896 \$ 126,205,952			\$				\$ -			\$ -			\$	-
12 Crossovers	ea	\$ 442,368			\$	-			\$ -			\$ -			\$	-
13 Cut & Cover Double Track Tunnel 14 Trench Long (2 tracks) (<1000 ft)	Mile Mile	\$ 131,246,080 \$ 57,524,224			0.00 \$	-		0.00 \$	\$ - \$		0.00 0.00				0.00 \$ 0.00 \$	-
Trench Long (4 tracks) (1000 + ft)	Mile	\$ 57,524,224 \$ 86,286,336			0.001 3	, -		0.00	ψ <u>-</u>		1.57	\$ 135,639,505			0.00 \$	-
Trench Short (2 tracks) (<1000 ft)	Mile	\$ 78,843,904														
15 Trench Short (4 tracks) (1000 + ft) 16 Mechanical & Electrical for Tunnels	Mile Mile	\$ 118,265,856 \$ 11,848,704			\$	- :			\$ - \$			- ¢			1.57 \$	18,625,804
17 Retaining Walls	Mile	\$ 11,848,704 \$ 8,613,888			0.00	, - }		0.00	\$ -		0.00	\$ -			0.00 \$	10,023,004
18 Containment Walls	Mile	\$ 5,907,456			\$	-			\$ -		0.00	\$ -			\$	-
19 Single Track Cut and Cover Subway Four Track Drill & Blast	Mile Mile	\$ 131,246,080 \$ 293,775,360			\$	-			\$ - \$			- \$			\$	-
Four Track Mined (Soft Soil)	Mile	\$ 293,775,360 \$ 158,400,000				, - } -			\$ -			\$ -			\$	-
Four Track TBM (<6 Miles)	Mile	\$ 213,274,624			[[]	
Four Track TBM w/3rd Tube (>6 Miles) Four Track Cut & Cover Tunnel	Mile Mile	\$ 353,441,792 \$ 262,492,160			0.00 \$:		0.00	¢		0.00	¢			1.57 \$	412,629,721
TOUR HACK OUT & COVER FUITHER	iviile	φ 202,472,100			0.0013	, -		0.00	φ -		0.00	Ψ -			1.5/ \$	412,029,121
Grade Separations																
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea ea	\$ 13,284,352 \$ 19,926,528			\$	-			\$ -			- •			\$	-
2 Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$ 19,926,528 \$ 2,759,680			3 \$	8,279,040		3 3	\$ 8,279,040		0	\$ -			0 \$	-
3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$ 2,029,568							\$ -			\$ -			\$	-
4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 3,563,520			\$	-		3	\$ -		3	\$ 10,690,560			3 \$	
5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea ea	\$ 3,593,216 \$ 2,850,816				-			\$ - \$ -			\$ -			\$	
6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$ 3,171,328							\$ -			\$ -			\$	-
		•	•		•		•	•		• '	•				•	

Cuarter Cuar	COST ELEMENTS	UNIT UNIT PRICE		Aerial Viaduct	(4 Tracks)			Aerial Viaduc	t (2 Tracks)			Open Trenc	h (4 tracks)			Covered	d Trench		
Company Comp	Subsection 4			0				0								,	0		
Company Comp		Quarter)	Ct 14F0 00	Ct+ 1522 00	1	E7 MU	Ct 14F0 00	Ct+ 1522 00	1 1 1	7 8 4:1	Ct 14E0 00	(,	E7 Mil	Ct+ 14F0 00	(C	E7 Mil	
The content of the			Start: 1450 + 00	Start: 1533 + 00	1.8	57 Miles	Start: 1450 + 00	Start: 1533 + 00	1.5	o / Miles	Start: 1450 + 00	Start: 1533 + 00	1.	57 Miles	Start: 1450 + 00	Start: 1533 + 00	I	57 MIIES	
The content of the	Subsection Details				Quant.	Cost			Quant.	Cost			Quant.	Cost		 	Quant.	Cost	
March Marc	Double Track At-Grade (Mile)		Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 0 + 00	Start: 0 + 00	0.00 Miles		
The first of the Market Service (1985)	Double Track Elevated (Mile)							End: 1533 + 00					0.00 Miles						
The first processor description of control relation of Control (1996) (1													0.00 Miles						
The Control Market Services 1				End: 0 : 00				End: 0 : 00				End: 0 : 00	0.00 Miles			End. 0 . 00	0.00 Willes		
The first personal process of the personal process of												E110. 0 + 00	0.00 Miles			E110. U + 00			
Second State Seco				E11d. 1555 1 00	0.00 Miles			Elia. 0 1 00					0.00 Miles			End: 1533 + 00			
### Address processes	Four Track Trench (Mile)			0.00 Miles	0.00 Miles			0.00 Miles	0.00 Miles			End: 1533 + 00	1.57 Miles		Start: 0 + 00		0.00 Miles		
Authorities Leg						\$ -				\$ -			0	\$ -			0	\$	-
	8 Minor Crossing Closures	ea \$ 87,04)			\$ -				\$ -				\$ -			0	\$	-
	Duilding House																		
2 Commerce Processing Commerce Process	1 Intermediate Descender Stations	Fach (¢				¢				¢				¢				¢	
Part Propries State Activities Part State	2 Terminal Passenger Stations		-			\$ -				\$ - \$ -				\$ -				\$	
Content of Content	Caltrain Passenger Station - At-Grade)			\$ -				\$ -				\$ -				\$	-
Column Process Column Co	Caltrain Passenger Station - On Structure	Each \$15,000,00)		1	\$ 15,000,000			1	\$ 15,000,000	1			\$ -				\$	-
Content State Process)			\$ -				\$ -				\$ -				\$	-
Parking Solutions						\$ -				\$ -			1	\$ 15,000,000			1	\$ 15,000	,000
Species Spec			1			\$ -				\$ -				\$ -				\$	-
Descript Section Secti			-			\$ -				\$ -				-				\$	-
Signate Floor Recording (Precorated)	Ji aiking - At Grade	space of				Ψ -				Ψ -				Ψ -				Ψ	-
Signate Floor Recording (Precorated)	Rail & Utility Relocation																		
Single Press Remark Fig. 5 135000 5 5 5 5 5 5 5 5 5	1 Single Track Relocation (Temporary)	Mile \$ 2,000,896	5			\$ -				\$ -				\$ -				\$	-
Second Series Dates March						\$ -				\$ -				\$ -				\$	-
Shape Unity Horiconton-Unity Horiconto	3 Single Track Removal					\$ -				\$ -				\$ -				\$	-
April Property P						\$ -				\$ -	•			\$ -				\$	-
May						\$ -				\$ -				\$ -				\$	-
Solution	7 Major Utility Relocations - Suburban					\$ -				\$ - \$				\$ -				\$	
ROW (year for each segment ROW prografor varies ROW prograf	8 Major Utility Relocations - Undeveloped					\$ -				\$ -				\$ -				\$	-
Notice place Section																			
Dense Uhen																			
2 1		1. 1																	
Some Substants						-				\$ -	•			-				\$	-
Subtories Subt						\$ - ¢				\$ - ¢ -				\$ - ¢				\$	-
Subtoolspace Across Acro	4 Suburban					\$ -				\$ -				\$ -				\$	_
Sold registed for Temp Construction Exement Arc	5 Undeveloped					\$ -				\$ -	,			\$ -				\$	-
2 Utahan						\$ -				\$ -				\$ -				\$	-
Description According of Substrain According facilities Acco						В				В				\$ -				\$	-
Subtrache Subt						-				-				-				\$	-
Substitution Subs						-				\$ -	•			-				\$	-
Regind Vivey Required for Stations, Maintenance & Parking Facilities 6 Dense Utban						\$ - ¢ -				• - • -				•				\$	-
Observe Urban Acre \$ 2,786,237 Acre \$ 1,371,510 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$		Acie				Ψ -				Ψ -				Ψ -				¥	
Turbin Substitution Substituti		Acre \$ 2,786,32				\$ -				\$ -				\$ -				\$	-
Subtrale Subtrale	7 Urban	Acre \$ 1,371,510				\$ -				\$ -				\$ -				\$	-
Traction Power Supply Program Implementation Costs (per screening) (25%) Subtotal						\$ -				\$ -				\$ -				\$	-
Environmental Mitigation = 3% Line Costs System Elements Signaling (AT C) Communications (w/ Fiber Optic Backbone) Mile \$ 2,070,000	9 Suburban					\$ -				\$ -	•			\$ -				\$	-
System Elements Signaling (ATC) Signaling	Forumental Mitigation = 3% Line Costs	Acre \$ 3,64				\$ 2,415,401								\$ 5.705.244				\$ 14544	- 50Ω
Subtotal	Environmental ivilligation – 570 Ellic Costs					Ψ 3,013,001				Ψ ∠,JU7,JU0				ψ J,1UJ,200				Ψ 14,000,	,570
Subtotal	System Elements																		
2 Communications (wf Fiber Optic Backbone) 3 Wayside Protection System Electrification Items 1 Traction Power Supply 2 Traction Power Distribution Program Implementation Costs (per screening) Program Implementation Costs (per screening) Contingencies (per screening) (25%) Subtotal Mile S 540,000 Mile S 108,000 S 1.57 \$ 848,864 S 1.57 \$ 848,864 S 1.57 \$ 1,839,205 S 1.57 \$ 1,839,205 S 1.57 \$ 1,839,205 S 1.57 \$ 1,839,205 S 1.57 \$ 2,334,375 S 1,839,205 S 1.57 \$ 2,334,375 S 1.57 \$ 2,33	1 Signaling (ATC)				1.57	\$ 3,253,977			1.57	\$ 3,253,977			1.57	\$ 3,253,977					,977
Electrification Items 1 Traction Power supply 2 Traction Power Distribution Subtotal Subtotal Mile \$ 1,170,000 Mile \$ 1,157 \$ 1,839,205					1.57	\$ 848,864							1.57	\$ 848,864				\$ 848	,864
Traction Power Supply Traction Power Distribution Subtotal Program Implementation Costs (per screening) (25%) Subtotal Subtotal Subtotal Subtotal Subtotal Program Implementation Costs (per screening) (25%) Subtotal Subtota	3 Wayside Protection System	Mile \$ 108,000)		1.57	\$ 169,773			1.57	\$ 169,773	1		1.57	\$ 169,773			1.57	\$ 169	,773
Traction Power Supply Traction Power Distribution Subtotal Program Implementation Costs (per screening) (25%) Subtotal Subtotal Subtotal Subtotal Subtotal Program Implementation Costs (per screening) (25%) Subtotal Subtota	Electrification Items																		
2 Traction Power Distribution Subtoal Program Implementation Costs (per screening) (25%) Subtoal Subtoal Subtoal Subtoal Subtoal Program Implementation Costs (per screening) (25%) Subtoal		Mile ¢ 1 170 000	1		1 57	\$ 1,020,205			1 57	\$ 1,020,205	1		1 57	\$ 1,020,205			1 57	\$ 1,020	205
Program Implementation Costs (per screening) Program Implementation Costs (per screening) (25%) Subtotal Program Implementation Costs (per screening) (25%) Subtotal						\$ 2.334.375								\$ 2.334.375				\$ 2.334	
Program Implementation Costs (per screening) Program Implementation Costs (per screening) Program Implementation Costs (per screening) (25%) Program Implementation Costs (per screeni													1.07				1.07		
Program Implementation Costs Contingencies (per screening) (25%) \$ 33,145,456 \$ 199,535,644 \$ 199,535,644 \$ 145,471,838 \$ 307,512,145 \$ 307,512,145 \$ 765,391,892																			
Subtotal																			
Subtotal	Continue in (our respective) (050)					d 20445.55				h 0/4//===	.]			ф F4 004 750				A 407.4.1	F10
	Contingencies (per screening) (25%)					\$ 33,145,456				24,164,757				\$ 51,081,752				\$ 127,141	,510
	Subtotal					¢ 100 E25 / 44			1	¢ 14E 474 000		ı	-	¢ 207 E42 445				¢ 7/5004	902
			1					<u> </u>							<u> </u>				_

 \$ 200,000,000
 \$ 145,000,000
 \$ 308,000,000
 \$ 765,000,000

	ELEMENTS	UNIT	UNIT PRICE		Tunnel (HST only)	
Subsection 4			Base: 2009 (3rd			С	
			Quarter)	Start: 1450 + 00	Start: 1533 + 00		Miles
ubsection Details						Quant.	Cost
ouble Track At-Grade (Mile) ouble Track Elevated (Mile)				Start: 0 + 00 Start: 0 + 00	Start: 0 + 00	0.00 Miles 0.00 Miles	
Oouble Track Elevated (Mile)				Start: 1450 + 00	End: 1533 + 00	1.57 Miles	
Oouble Track Trench (Mile)				Start: 0 + 00	21101 1000 1 00	0.00 Miles	
our Track Construction/Reconstruct	on At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles	
our Track Elevated (Mile)				Start: 0 + 00	F 1 0 00	0.00 Miles	
our Track Tunnel (Mile) our Track Trench (Mile)				Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	
Double Track Section - Total				Start. 0 + 00		0.00 Miles	
1 Double Track Section - At Grade		Mile	\$ 2,100,224			0.00	\$
2 Double Track Section - On Structure		Mile	\$ 4,700,160			0.00	
3 Double Track Section - In Tunnel or	Subway	Mile	\$ 4,700,160			1.57	
4 Double Track Section - In Trench		Mile	\$ 4,700,160			0.00	\$
Four Track Section - Total							
Four-track Section - At Grade		Mile	\$ 4,200,448			0.00	\$
Four-Track Section - On Structure		Mile	\$ 9,400,320				\$
Four-Track Section - In Tunnel or St	ıbway	Mile	\$ 9,400,320			0	
Four-Track Section - In Trench		Mile	\$ 9,400,320			0	\$
Single Track Total							
Single Track - Total 5 Single Track Section - At Grade		Mile	\$ 1,549,312			0	\$
6 Single Track Section - On structure		Mile	\$ 2,350,080				\$
7 Single Track Section - In Tunnel or	Subway	Mile	\$ 2,350,080				\$
8 Single Track Section - In Trench	•	Mile	\$ 2,350,080				\$
9 Freight Double Track - At Grade		Mile	\$ 2,839,552				\$
0 Freight Single Track - At Grade		Mile	\$ 1,549,312			0	\$
Earthwork Items							
1 Site Preparation - Undeveloped		Acre	\$ 9,216			0.00	\$
2 Total Cut		CY	\$ 6.00			0.00	
3 Total Fill		CY	\$ 6.00			0.00	\$
4 Borrow		CY	\$ 13.00				\$
5 Spoil		CY	\$ 13.00				\$
6 Landscape erosion Control7 Security Fencing (Both sides of RO)	10	Acre Mile	\$ 6,144 \$ 144,384				\$ \$
8 Special Drainage Facilities	v)	5% Eart				0.00	\$
o opecial Brainage Facilities		070 Edit					•
Structures, Tunnels, Walls							
1 Standard Structure (2 tracks)		Mile	\$ 34,972,672			0.00	\$
Standard Structure (4 tracks)		Mile	\$ 52,459,008				•
2 High Structure		Mile	\$ 40,424,448				\$
3 Long Span Structure 4 Waterway Crossing - Primary		Mile Mile	\$ 61,919,232 \$ 85,342,208				\$
5 Waterway Crossing - Secondary (Irr	gation Canal)	Mile	\$ 92,049,408				\$
6 Twin Single Track Drill&Blast (<6 M		Mile	\$ 142,731,264				\$
7 Twin Single Track TBM (<6 Miles)	•	Mile	\$ 106,637,312			0.00	\$
8 Twin Single Track TBM w/3rd Tube	(<6 Miles)	Mile	\$ 176,720,896			0.00	
9 Double Track Drill & Blast		Mile	\$ 146,887,680			0.00	
0 Double Track Mined (Soft Soil) Double Track TBM (<6 Miles)		Mile Mile	\$ 79,200,000 \$ 106,637,312			0.00 1.57	
Double Track TBM w/3rd Tube (>6 i	Ailes)	Mile	\$ 176,720,896			1.37	\$ 107,030,
1 Seismic Chamber (Drill & Blast/Mine	•	ea	\$ 126,205,952				\$
2 Crossovers		ea	\$ 442,368				\$
3 Cut & Cover Double Track Tunnel		Mile	\$ 131,246,080				\$
4 Trench Long (2 tracks) (<1000 ft)		Mile	\$ 57,524,224			0.00	\$
Trench Long (4 tracks) (1000 + ft)		Mile	\$ 86,286,336				
Trench Short (2 tracks) (<1000 ft) Trench Short (4 tracks) (1000 + ft)		Mile Mile	\$ 78,843,904 \$ 118,265,856				\$
5 Trench Short (4 tracks) (1000 + ft) 6 Mechanical & Electrical for Tunnels		Mile Mile	\$ 118,265,856			1.57	\$ \$ 18,625,
7 Retaining Walls		Mile	\$ 8,613,888			0.00	
8 Containment Walls		Mile	\$ 5,907,456			1.00	\$
9 Single Track Cut and Cover Subway		Mile	\$ 131,246,080				\$
Four Track Drill & Blast		Mile	\$ 293,775,360				\$
Four Track Mined (Soft Soil)		Mile	\$ 158,400,000			0.00 0.00	\$
Four Track TBM (<6 Miles) Four Track TBM w/3rd Tube (>6 Mil	26)	Mile Mile	\$ 213,274,624 \$ 353,441,792			0.00	\$ \$
Four Track Cut & Cover Tunnel		Mile	\$ 262,492,160			0.00	*
and the same same same same same same same sam						3.50	•
Grade Separations							
1 Roadway Crossing HSR - 4 Lane Ro		ea	\$ 13,284,352				\$
Roadway Crossing HSR - 4 Lane Ro		ea	\$ 19,926,528				\$
2 Roadway Crossing HSR - 2 Lane Ro		ea	\$ 2,759,680			0	\$
	padway Under 2 Tracks (Undeveloped)	ea	\$ 2,029,568			_	\$
4 Roadway Crossing HSR - 4 Lane Ro 5 Roadway Crossing HSR - 4 Lane Ro		ea ea	\$ 3,563,520 \$ 3,593,216			0	\$ \$
Roadway Crossing HSR - 2 Lane Ro		ea	\$ 2,850,816				\$
	padway Over 2 Tracks (Undeveloped)	ea	\$ 3,171,328	Ĩ	l		\$

COST ELEMENTS	UNIT	UNIT PRICE		Tunnel ((HST only)		
Subsection 4		Base: 2009 (3rd			C		
		Quarter)	Start: 1450 + 00	Start: 1533 + 00	•	Miles	3
Subsection Details Double Track At-Grade (Mile)			Start: 0 + 00	Start: 0 + 00	Quant. 0.00 Miles		Cost
Double Track At-Grade (Mile)			Start: 0 + 00	Start. 0 + 00	0.00 Miles	-	
Double Track Tunnel (Mile)			Start: 1450 + 00	End: 1533 + 00	1.57 Miles		
Double Track Trench (Mile)			Start: 0 + 00		0.00 Miles		
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles	1	
Four Track Elevated (Mile) Four Track Tunnel (Mile)			Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	-	
Four Track Trench (Mile)			Start: 0 + 00	Elia. 0 1 00	0.00 Miles		
7 Street Bridging HSR Trench	ea	\$ 1,398,784			0	\$	-
8 Minor Crossing Closures	ea	\$ 87,040			0	\$	-
Building Items 1 Intermediate Passenger Stations	Each	\$ -				\$	
2 Terminal Passenger Stations	Each	\$ -				\$	
Caltrain Passenger Station - At-Grade	Each	\$15,000,000				\$	_
Caltrain Passenger Station - On Structure	Each	\$15,000,000				\$	-
Caltrain Passenger Station - In Tunnel or Subway	Each	\$15,000,000			1	\$	15,000,000
Caltrain Passenger Station - In Trench	Each	\$15,000,000				\$	-
3 Maintenance Facility 4 Parking - Structures	Each	\$ 123,921,884 \$ -				\$	-
5 Parking - Structures	space space	\$ -				\$	
of and years	Space	•				•	
Rail & Utility Relocation							
1 Single Track Relocation (Temporary)	Mile	\$ 2,000,896				\$	-
2 Single Track Relocation (Permanent)	Mile	\$ 2,000,896				\$	-
3 Single Track Removal 4 Major Utility Relocations - Dense Urban	Mile Mile	\$ 130,048 \$ 1,548,288				\$	-
5 Major Utility Relocations - Dense Orban	Mile	\$ 1,084,416				\$	
6 Major Utility Relocations - Dense Suburban	Mile	\$ 775,168				\$	_
7 Major Utility Relocations - Suburban	Mile	\$ 464,896				\$	-
8 Major Utility Relocations - Undeveloped	Mile	\$ 30,720				\$	-
ROW (Not Included) ROW required for each segment							
1 Dense Urban	Acre	\$ 2,786,321				\$	
2 Urban	Acre	\$ 1,371,510				\$	_
3 Dense Suburban	Acre	\$ 908,134				\$	-
4 Suburban	Acre	\$ 208,418				\$	-
5 Undeveloped	Acre	\$ 3,642				\$	-
ROW required for Temp. Construction Easement 1 Dense Urban	Acre					\$	-
2 Urban	Acre					\$	-
3 Dense Suburban	Acre					\$	_
4 Suburban	Acre					\$	-
5 Undeveloped	Acre					\$	-
Right-of-Way Required for Stations, Maintenance & Parking Facilities	Aoro	\$ 2,786,321				6	
6 Dense Urban 7 Urban	Acre	\$ 2,786,321 \$ 1,371,510				\$	-
8 Dense Suburban	Acre	\$ 908,134				\$	_
9 Suburban	Acre	\$ 208,418				\$	-
10 Undeveloped	Acre	\$ 3,642				\$	-
Environmental Mitigation = 3% Line Costs						\$	6,259,348
System Floments							
System Elements 1 Signaling (ATC)	Mile	\$ 2,070,000			1.57	\$	3,253,977
2 Communications (w/ Fiber Optic Backbone)	Mile	\$ 540,000			1.57		848,864
3 Wayside Protection System	Mile	\$ 108,000			1.57		169,773
Electrification Items	N 4**	A 470.00					1 000 005
1 Traction Power supply 2 Traction Power Distribution	Mile Mile	\$ 1,170,000 \$ 1,485,000			1.57 1.57		1,839,205 2,334,375
Subtota		φ 1,400,000			1.57	\$	2,334,375
Program Implementation Costs (per screening)						\$	56,954,372
Program Implementation Costs							
						1	
Contingencies (per screening) (25%)						\$	55,837,619
							00/4/5
Subtotal						\$	336,142,468

Subtotal (Rounded) \$ 336,000,000



COST ELEMENTS	UNIT	UNIT PRICE		erial Viaduct (2 to	racks) (HST only)		At-Grade (2 tracks) (C	ALTRAIN only	y)		Open Trench (2 t	racks) (HST only)		Covered Tre	nch (HST only)	
Subsection 4		Base: 2009 (3rd Quarter)	t	D)		D				[D			D	
			Start: 1533 + 00	Start: 1565 + 00	0.61 Miles	S	Start: 1533 + 00 End: 1565 + 00	0.61 Miles		Start: 1533 + 00	Start: 1565 + 00	0.61 Mile	S	Start: 1533 + 00	0.61 N	Miles
Subsection Details					Quant.	Cost		Quant.	Cost			Quant.	Cost		Quant.	Cost
Double Track At-Grade (Mile) Double Track Elevated (Mile)			Start: 0 + 00 Start: 1533 + 00	Start: 0 + 00 End: 1565 + 00	0.00 Miles 0.61 Miles		Start: 1533 + 00 End: 1565 + 00 Start: 0 + 00	0.61 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	Start: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00 Start: 0 + 00	0.00 Miles 0.00 Miles	
Double Track Tunnel (Mile)			Start: 0 + 00	21101 1000 1 00	0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1533 + 00 End: 1565 + 00	0.61 Miles	
Double Track Trench (Mile) Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles			0.00 Miles 0.00 Miles		Start: 1533 + 00 Start: 0 + 00	End: 1565 + 00 End: 0 + 00	0.61 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00 Fnd: 0 + 00	0.00 Miles 0.00 Miles	
Four Track Elevated (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles	
Four Track Tunnel (Mile) Four Track Trench (Mile)			Start: 0 + 00 Start: 0 + 00	0.00 Miles	0.00 Miles 0.00 Miles			0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 End: 0 + 00 Start: 0 + 00	0.00 Miles 0.00 Miles	
Double Track Section - Total	Milo	¢ 2100224			0.00 ¢			0./1	¢ 1.272.0/2			0.00 ¢			0.00 ¢	
1 Double Track Section - At Grade 2 Double Track Section - On Structure	Mile Mile	\$ 2,100,224 \$ 4,700,160			0.00 \$ 0.61 \$	2,848,582		0.61 0.00				0.00 \$ 0.00 \$	-		0.00 \$ 0.00 \$	
3 Double Track Section - In Tunnel or Subway	Mile Mile	\$ 4,700,160 \$ 4,700,160			0.00 \$ 0.00 \$	-		0.00 0.00				0.00 \$ 0.61 \$	- 2,848,582		0.61 \$ 0.00 \$	2,848,5
4 Double Track Section - In Trench	IVIIIe	\$ 4,700,100			0.00 \$	-		0.00	5 -			0.01 \$	2,848,382		0.00 \$	1
Four Track Section - Total	Mile	¢ 4200.440			0.00			0.00	¢			0.00 ¢			0.00	
Four-track Section - At Grade Four-Track Section - On Structure	Mile Mile	\$ 4,200,448 \$ 9,400,320			0.00 \$ 0.00 \$	-		0.00	\$ -			0.00 \$	-		0.00 \$	
Four-Track Section - In Tunnel or Subway	Mile Mile	\$ 9,400,320			0.00 \$	-		0.00				0 \$	-		0.00 \$	
Four-Track Section - In Trench	IVIIIe	\$ 9,400,320			0.00 \$	-		0.00	\$ -			0.00 \$	-		0 \$	
Single Track - Total	Mila	¢ 1 E A O 212			0.00			0.00	¢			0 6			0 6	
5 Single Track Section - At Grade 6 Single Track Section - On structure	Mile Mile	\$ 1,549,312 \$ 2,350,080			0.00 \$ 0.00 \$	-		0.00 0.00				0 \$	-		0 \$	
7 Single Track Section - In Tunnel or Subway	Mile	\$ 2,350,080			0.00 \$	-		0.00				0 \$	-		0 \$	
8 Single Track Section - In Trench	Mile	\$ 2,350,080			0.00 \$	-		0.00	a -			0 \$	-		U \$	
9 Freight Double Track - At Grade	Mile Mile	\$ 2,839,552			0.00 \$	-		0.00				0 \$	-		0 \$	
10 Freight Single Track - At Grade	iville	\$ 1,549,312			0.00 \$	-		0.00	> -			0 \$	-		0 \$	
Earthwork Items					0.00			0.00	•			0.00	74.470		0.00	74.47
1 Site Preparation - Undeveloped 2 Total Cut	Acre CY	\$ 9,216 \$ 6.00			0.00 \$ 0.00 \$	-		0.00				8.08 \$ 260740.74 \$	74,473 1,564,444		8.08 \$ 260740.74 \$	
3 Total Fill	CY	\$ 6.00			0.00 \$	-		0.00	\$ -			0.00 \$	-		\$	i
4 Borrow 5 Spoil	CY	\$ 13.00 \$ 13.00			0.00 \$ 0.00 \$	-		0.00 0.00	\$ - \$ -			0.00 \$ 260740.74 \$	3,389,630		0.00 \$ 260740.74 \$	
6 Landscape erosion Control	Acre	\$ 6,144			0.00 \$	-		0.00	\$ -			8.08 \$	49,648		8.08 \$	49,648
7 Security Fencing (Both sides of ROW) 8 Special Drainage Facilities	Mile 5% Earl	\$ 144,384 thwork			0.00 \$	-		0.00	\$ - \$ -			0.61 \$	87,505 258,285		0.61 \$	87,505 258,285
	070 24.								•			ľ	200,200		ľ	200,200
Structures, Tunnels, Walls 1 Standard Structure (2 tracks)	Mile	\$ 34,972,672			0.61 \$	21,195,559		0.00	\$ -			0.00 \$	_		0.00 \$	
Standard Structure (4 tracks)	Mile	\$ 52,459,008			0.01	21,175,557		0.00	•			0.00			υ.υυ ψ	
2 High Structure 3 Long Span Structure	Mile Mile	\$ 40,424,448 \$ 61,919,232			\$	-			\$ - \$			\$	-		\$	
4 Waterway Crossing - Primary	Mile	\$ 85,342,208							•			\$	-		\$	
5 Waterway Crossing - Secondary (Irrigation Canal) 6 Twin Single Track Drill&Blast (<6 Miles)	Mile Mile	\$ 92,049,408 \$ 142,731,264			\$	-			\$ - \$			\$	-		\$	
7 Twin Single Track TBM (<6 Miles)	Mile	\$ 106,637,312			\$	-			\$ -			\$	-		\$	
8 Twin Single Track TBM w/3rd Tube (<6 Miles) 9 Double Track Drill & Blast	Mile Mile	\$ 176,720,896 \$ 146,887,680			0.00 \$	-		0.00	\$ - \$ -			0.00 \$	-		0.00 \$	
10 Double Track Mined (Soft Soil)	Mile	\$ 79,200,000			\$	-		0.00	\$ -			\$.55	-		\$	i
Double Track TBM (<6 Miles) Double Track TBM w/3rd Tube (>6 Miles)	Mile Mile	\$ 106,637,312 \$ 176,720,896														
11 Seismic Chamber (Drill & Blast/Mined)	ea	\$ 126,205,952			\$	-			\$ -			\$	-		\$	
12 Crossovers 13 Cut & Cover Double Track Tunnel	ea Mile	\$ 442,368 \$ 131,246,080			0.00 \$	-		0.00	\$ - \$ -			0.00 \$	-		0.61 \$	79,543,07
14 Trench Long (2 tracks) (<1000 ft)	Mile	\$ 57,524,224			0.00 \$	-		0.00				0.61 \$	34,863,166		0.00 \$	
Trench Long (4 tracks) (1000 + ft) 15 Trench Short (2 tracks) (<1000 ft)	Mile Mile	\$ 86,286,336 \$ 78,843,904			\$	_			\$ -			\$	_		\$;
Trench Short (4 tracks) (1000 + ft)	Mile	\$ 118,265,856										ľ			Ψ	
16 Mechanical & Electrical for Tunnels 17 Retaining Walls	Mile Mile	\$ 11,848,704 \$ 8,613,888			0.00 \$	-		0.00	\$ - \$ -			0.00 \$	- -		0.61 \$ 0.00 \$	
18 Containment Walls	Mile	\$ 5,907,456			\$	-		0.00	\$ -			0.00 \$	-		\$	i
19 Single Track Cut and Cover Subway Four Track Drill & Blast	Mile Mile	\$ 131,246,080 \$ 293,775,360			\$ \$	-			\$ - \$ -			\$ \$	-		\$	
Four Track Mined (Soft Soil)	Mile	\$ 158,400,000			\$	-			\$ -			\$	-		\$	i
Four Track TBM (<6 Miles) Four Track TBM w/3rd Tube (>6 Miles)	Mile Mile	\$ 213,274,624 \$ 353,441,792														
Four Track Cut & Cover Tunnel	Mile	\$ 262,492,160			0.00 \$	-		0.00	\$ -			0.00 \$	-		0.00 \$	i
Grade Separations																
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$ 13,284,352			1 \$	13,284,352			\$ -			\$	-		\$	i
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) 2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea ea	\$ 19,926,528 \$ 2,759,680			0 \$	-		0	\$ - \$ -) \$ 0 \$	-		\$ 0 \$	
3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$ 2,029,568			\$	-			\$ -			\ \s\$	-		\$	
4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban) 5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea ea	\$ 3,563,520 \$ 3,593,216			\$	-			\$ - \$ -			\$	-		\$; :
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 2,850,816			\$	-			\$ -			\$	-		\$	
6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$ 3,171,328			\$	-			\$ -			\$	-		\$	·

COST ELEMENTS	UNIT	T UNIT PRIC		Aerial Viaduct (2 tr	racks) (HST only)	Į.	At-Grade (2 tracks)	(CALTRAIN on	ly)		Open Trench (2 tr	acks) (HST only	r)	Covered T	rench (HST only)	
Subsection 4		Base: 2009 (rd												_	
		Quarter)	Start: 1533 + 00	D Start: 1565 + 00	0.61 Miles	Stort: 1522 + 00	End: 1565 + 00	0.61 Miles	1	Start: 1533 + 00	Start: 1565 + 00	0.61	Milos	Start: 1533 + 00 Start: 1565 + 00	D 0.6	1 Miles
			Start: 1533 + 00	3 Start: 1505 + 00	U.01 Willes	Start: 1533 + 00	E110: 1505 + 00	0.61 Miles	<u> </u>	Start: 1533 + 00	Start: 1505 + 00	0.01	willes	Start: 1000 + 00	0.0	Tivilles
Subsection Details					Quant. Cost			Quant.	Cost			Quant.	Cost		Quant.	Cost
Double Track At-Grade (Mile)			Start: 0 + 00	Start: 0 + 00	0.00 Miles		End: 1565 + 00	0.61 Miles		Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 0 + 00 Start: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)			Start: 1533 + 00	End: 1565 + 00	0.61 Miles	Start: 0 + 00		0.00 Miles	1	Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles	
Double Track Tunnel (Mile) Double Track Trench (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	-	Start: 0 + 00 Start: 1533 + 00	End: 1565 + 00	0.00 Miles 0.61 Miles		Start: 1533 + 00 End: 1565 + 00 Start: 0 + 00	0.61 Miles 0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles	Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00 End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles	Start: 0 + 00	Lital 6 7 66	0.00 Miles	1	Start: 0 + 00	Ziidi 0 7 00	0.00 Miles		Start: 0 + 00	0.00 Miles	
Four Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles	Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00 End: 0 + 00	0.00 Miles	
Four Track Trench (Mile)		14 40007	Start: 0 + 00	0.00 Miles	0.00 Miles	Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	0.00 Miles	
7 Street Bridging HSR Trench 8 Minor Crossing Closures	ea	\$ 1,398,7 \$ 87,0			\$	-			-			0	\$ -		0	\$ -
8 Willion Crossing Closures	ea	\$ 87,0	.0		\$	-			5 -				5 -		U	3 -
Building Items																
1 Intermediate Passenger Stations	Each		-		\$	-			\$ -				\$ -			\$ -
2 Terminal Passenger Stations	Each		-		\$	-			\$ -				\$ -			\$ -
Caltrain Passenger Station - At-Grade	Each				\$	-			-				\$ -			\$ -
Caltrain Passenger Station - On Structure Caltrain Passenger Station - In Tunnel or Subway	Each Each				\$	-			-				\$ -			-
Caltrain Passenger Station - In Trumer of Subway	Each				\$	-			\$				\$ -			\$ -
3 Maintenance Facility	Each		4		\$	-			\$ -				\$ -			\$ -
4 Parking - Structures	space		-		\$	-			\$ -				\$ -			\$ -
5 Parking - At Grade	space		-		\$	=			\$ -				\$ -			\$ -
Rail & Utility Relocation 1 Single Track Relocation (Temporary)	Mile	\$ 2,000,8	,		6				¢				¢			¢
2 Single Track Relocation (Temporary)	Mile Mile	\$ 2,000,8			\$	-			\$ -				\$ -			\$ -
3 Single Track Removal	Mile	\$ 2,000,0			\$	-			\$ -				\$ -			\$ -
4 Major Utility Relocations - Dense Urban	Mile	\$ 1,548,2			\$	=			\$ -				\$ -			\$ -
5 Major Utility Relocations - Urban	Mile	\$ 1,084,4			\$	-			\$ -				\$ -			\$ -
6 Major Utility Relocations - Dense Suburban	Mile	\$ 775,1			\$	-			\$ -				\$ -			\$ -
7 Major Utility Relocations - Suburban	Mile	\$ 464,8			\$	-			\$ -				\$ -			-
8 Major Utility Relocations - Undeveloped	Mile	\$ 30,7	0		\$	-			\$ -				\$ -			\$ -
ROW (Not Included)																
ROW required for each segment																
1 Dense Urban	Acre	\$ 2,786,3	1		\$				\$ -				\$ -			\$ -
2 Urban	Acre				\$	-			\$ -				\$ -			-
3 Dense Suburban	Acre				\$	-			-				\$ -			-
4 Suburban	Acre				\$	-			-				\$ -			-
5 Undeveloped ROW required for Temp. Construction Easement	Acre	\$ 3,6	2		\$	-							\$ -			\$ - ¢
1 Dense Urban	Acre				° B	-			B -				\$ -			\$ -
2 Urban	Acre				\$	-			\$ -				\$ -			\$ -
3 Dense Suburban	Acre				\$	-			\$ -				\$ -			-
4 Suburban	Acre				\$	-			\$ -				\$ -			-
5 Undeveloped	Acre				\$	-			\$ -				\$ -			-
Right-of-Way Required for Stations, Maintenance & Parking Facilities 6 Dense Urban	Acro	\$ 2,786,3	1		•				¢				¢			¢
7 Urban	Acre				\$	-			\$ -				\$ -			\$ -
8 Dense Suburban	Acre				\$	-			\$ -				\$ -			\$ -
9 Suburban	Acre		8		\$	-			\$ -				\$ -			-
10 Undeveloped	Acre	\$ 3,6	2		\$	-			\$ -				\$ -			-
Environmental Mitigation = 3% Line Costs					\$ 1,119	9,855			\$ 38,186				\$ 1,294,072			\$ 2,849,900
System Elements																
1 Signaling (ATC)	Mile	\$ 2,070,0	0		0.61 \$ 1,254	1.545		0.61	\$ 1,254,545			0.61	\$ 1,254,545		0.61	\$ 1,254,545
2 Communications (w/ Fiber Optic Backbone)	Mile	\$ 540,0				7,273		0.61				0.61	\$ 327,273		0.61	\$ 327,273
3 Wayside Protection System	Mile	\$ 108,0	0		0.61 \$ 65	5,455		0.61				0.61	\$ 65,455		0.61	
E											ļ					
Electrification Items		A 4 4 70 -			0.41 +	001			d 700.00:		l		4 300.00:			A 700.000
1 Traction Power supply 2 Traction Power Distribution	Mile Mile	\$ 1,170,0 \$ 1,485,0				9,091),000		0.61 0.61				0.61 0.61			0.61 0.61	\$ 709,091 \$ 900,000
2 Haction Power Distribution Subto		φ 1,400,0			\$ 41,704			0.61	\$ 4,567,413			0.01	\$ 47,686,169		0.01	\$ 101,102,943
Program Implementation Costs (per screening)					\$ 10,634				\$ 1,164,690		ļ		\$ 12,159,973			\$ 25,781,250
Program Implementation Costs					, 10,00	•			,,,,,,,,				-, -, -, -, -, -, -, -, -, -, -, -, -, -			,,
											ļ					
Contingencies (per screening) (25%)					\$ 10,426	5,178			\$ 1,141,853				\$ 11,921,542			\$ 25,275,736
Cubtotal			1	1	A (0.7/5	F00	I	I	¢ (072.051				¢ 747/7/05		1	¢ 150.150.000
Subtotal					\$ 62,765				\$ 6,873,956				\$ 71,767,685	1		\$ 152,159,929

COST ELEMENTS		UNIT PRICE	Tunnel (HST only)				
Subsection 4		Base: 2009 (3rd		D			
		Quarter)	Start: 1533 + 00 Start: 1565 + 00		0.61 Miles		
ubsection Details			C++ 0 00	Ctt 0 00	Quant.		Cost
ouble Track At-Grade (Mile) ouble Track Elevated (Mile)			Start: 0 + 00 Start: 0 + 00	Start: 0 + 00	0.00 Miles 0.00 Miles		
ouble Track Tunnel (Mile)			Start: 1533 + 00	End: 1565 + 00	0.61 Miles		
ouble Track Trench (Mile)			Start: 0 + 00		0.00 Miles		
our Track Construction/Reconstruction At-Grade (Mile) our Track Elevated (Mile)			Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		
our Track Tunnel (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		
our Track Trench (Mile)			Start: 0 + 00		0.00 Miles		
Double Track Section - Total	Mile	¢ 2.100.224			0.00		
1 Double Track Section - At Grade 2 Double Track Section - On Structure	Mile	\$ 2,100,224 \$ 4,700,160			0.00 0.00		
3 Double Track Section - In Tunnel or Subway	Mile	\$ 4,700,160			0.61		2,848,5
4 Double Track Section - In Trench	Mile	\$ 4,700,160			0.00	\$	
Four Track Section - Total							
Four-track Section - At Grade	Mile	\$ 4,200,448			0.00	\$	
Four-Track Section - On Structure	Mile	\$ 9,400,320			0.00	\$	
Four-Track Section - In Tunnel or Subway	Mile	\$ 9,400,320			0.00		
Four-Track Section - In Trench	Mile	\$ 9,400,320			0	\$	
5 Single Track Section - At Grade	Mile	\$ 1,549,312			0	\$	
6 Single Track Section - On structure	Mile	\$ 2,350,080			0	\$	
7 Single Track Section - In Tunnel or Subway	Mile	\$ 2,350,080			0	\$	
B Single Track Section - In Trench	Mile	\$ 2,350,080			0	\$	
9 Freight Double Track - At Grade	Mile	\$ 2,839,552			0	\$	
Freight Single Track - At Grade	Mile	\$ 1,549,312			0	\$	
Earthwork Items	Aoro	e 0.21/			0.00	¢	
1 Site Preparation - Undeveloped 2 Total Cut	Acre CY	\$ 9,216 \$ 6.00			0.00 0.00		
3 Total Fill	CY	\$ 6.00			0.00		
4 Borrow	CY	\$ 13.00			0.00		
5 Spoil	CY	\$ 13.00			0.00		
6 Landscape erosion Control 7 Security Fencing (Both sides of ROW)	Acre Mile	\$ 6,144 \$ 144,384			0.00 0.00		
8 Special Drainage Facilities	5% Eart				0.00	\$	
, , , , , , , , , , , , , , , , , , , ,						ľ	
Structures, Tunnels, Walls							
1 Standard Structure (2 tracks) Standard Structure (4 tracks)	Mile Mile	\$ 34,972,672 \$ 52,459,008			0.00	\$	
2 High Structure	Mile	\$ 40,424,448				\$	
3 Long Span Structure	Mile	\$ 61,919,232				\$	
4 Waterway Crossing - Primary	Mile	\$ 85,342,208				\$	
Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$ 92,049,408				\$	
6 Twin Single Track Drill&Blast (<6 Miles) 7 Twin Single Track TBM (<6 Miles)	Mile Mile	\$ 142,731,264 \$ 106,637,312				\$	
8 Twin Single Track TBM v/3rd Tube (<6 Miles)	Mile	\$ 176,720,896				\$	
9 Double Track Drill & Blast	Mile	\$ 146,887,680			0.00	\$	
Double Track Mined (Soft Soil)	Mile	\$ 79,200,000				\$	/ / / / / /
Double Track TBM (<6 Miles) Double Track TBM w/3rd Tube (>6 Miles)	Mile Mile	\$ 106,637,312 \$ 176,720,896			0.61	\$	64,628,6
Double Track TBM W/3rd Tube (>6 Miles) 1 Seismic Chamber (Drill & Blast/Mined)	ea	\$ 176,720,896 \$ 126,205,952				\$	
2 Crossovers	ea	\$ 442,368				\$	
3 Cut & Cover Double Track Tunnel	Mile	\$ 131,246,080			0.00		
4 Trench Long (2 tracks) (<1000 ft)	Mile	\$ 57,524,224			0.00	\$	
Trench Long (4 tracks) (1000 + ft) 5 Trench Short (2 tracks) (<1000 ft)	Mile Mile	\$ 86,286,336 \$ 78,843,904				\$	
Trench Short (4 tracks) (1000 + ft)	Mile	\$ 118,265,856				Ψ	
Mechanical & Electrical for Tunnels	Mile	\$ 11,848,704	1		0.61		7,181,0
Retaining Walls	Mile	\$ 8,613,888			0.00	\$	
3 Containment Walls 9 Single Track Cut and Cover Subway	Mile	\$ 5,907,456				\$	
Four Track Cut and Cover Subway Four Track Drill & Blast	Mile Mile	\$ 131,246,080 \$ 293,775,360				\$	
Four Track Mined (Soft Soil)	Mile	\$ 158,400,000			0.00	\$	
Four Track TBM (<6 Miles)	Mile	\$ 213,274,624			0.00	\$	
Four Track Cut & Cover Tuppel	Mile	\$ 353,441,792			0.00	\$	
Four Track Cut & Cover Tunnel	Mile	\$ 262,492,160			0.00	3	
Grade Separations							
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$ 13,284,352				\$	
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$ 19,926,528				\$	
Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$ 2,759,680			0	\$	
Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea ea	\$ 2,029,568 \$ 3,563,520				\$	
5 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Glubari)	ea	\$ 3,593,216				\$	
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 2,850,816				\$	
6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$ 3,171,328	1	l	l	\$	

COST ELEMENTS	UNIT	UNIT PRICE		Tunnel ((HST only)	
Subsection 4		Base: 2009 (3rd			D	
		Quarter)	Start: 1533 + 00	Start: 1565 + 00		Miles
Subsection Details Double Track At-Grade (Mile)			Start: 0 + 00	Start: 0 + 00	Quant. 0.00 Miles	Cost
Double Track At-Grade (Mile)			Start: 0 + 00	Start. 0 + 00	0.00 Miles	1
Double Track Tunnel (Mile)			Start: 1533 + 00	End: 1565 + 00	0.61 Miles	
Double Track Trench (Mile)			Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile) Four Track Elevated (Mile)			Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	
Four Track Tunnel (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Trench (Mile)			Start: 0 + 00		0.00 Miles	
7 Street Bridging HSR Trench	ea	\$ 1,398,784			0	
8 Minor Crossing Closures	ea	\$ 87,040			0	\$ -
Building Items						
1 Intermediate Passenger Stations	Each	\$ -				\$ -
2 Terminal Passenger Stations	Each	\$ -				\$ -
Caltrain Passenger Station - At-Grade	Each	\$15,000,000				\$ -
Caltrain Passenger Station - On Structure	Each	\$15,000,000				-
Caltrain Passenger Station - In Tunnel or Subway Caltrain Passenger Station - In Trench	Each Each	\$15,000,000 \$15,000,000				\$ - \$ -
3 Maintenance Facility	Each	\$15,000,000				\$ -
4 Parking - Structures	space	\$ -				\$ -
5 Parking - At Grade	space					\$ -
Dail o I Milita Dala antica						
Rail & Utility Relocation 1 Single Track Relocation (Temporary)	Mile	\$ 2,000,896				\$ -
2 Single Track Relocation (Permanent)	Mile	\$ 2,000,896				\$ -
3 Single Track Removal	Mile	\$ 130,048				\$ -
4 Major Utility Relocations - Dense Urban	Mile	\$ 1,548,288				\$ -
5 Major Utility Relocations - Urban	Mile	\$ 1,084,416				-
6 Major Utility Relocations - Dense Suburban 7 Major Utility Relocations - Suburban	Mile Mile	\$ 775,168 \$ 464,896				\$ - \$ -
8 Major Utility Relocations - Suburban	Mile	\$ 404,690				\$ -
Simple Samy Norocalions Sinastrolopea		00/120				Ť
ROW (Not Included)						
ROW required for each segment	١.	A 0.70/ 004				•
1 Dense Urban 2 Urban	Acre Acre	\$ 2,786,321 \$ 1,371,510				\$ - \$ -
3 Dense Suburban	Acre	\$ 908,134				\$ -
4 Suburban	Acre	\$ 208,418				\$ -
5 Undeveloped	Acre	\$ 3,642				-
ROW required for Temp. Construction Easement 1 Dense Urban	Aoro					-
2 Urban	Acre Acre					\$ - \$ -
3 Dense Suburban	Acre					\$ -
4 Suburban	Acre					\$ -
5 Undeveloped	Acre					-
Right-of-Way Required for Stations, Maintenance & Parking Facilities	Acro	¢ 2704 221				4
6 Dense Urban 7 Urban	Acre Acre	\$ 2,786,321 \$ 1,371,510				\$ -
8 Dense Suburban	Acre	\$ 908,134				\$ -
9 Suburban	Acre	\$ 208,418				\$ -
10 Undeveloped	Acre	\$ 3,642				\$ - \$ 2,239,749
Environmental Mitigation = 3% Line Costs						\$ 2,239,749
System Elements						
1 Signaling (ATC)	Mile	\$ 2,070,000			0.61	\$ 1,254,545
2 Communications (w/ Fiber Optic Backbone)	Mile	\$ 540,000			0.61	\$ 327,273
3 Wayside Protection System	Mile	\$ 108,000			0.61	\$ 65,455
Electrification Items						
Electrification Items 1 Traction Power supply	Mile	\$ 1,170,000			0.61	\$ 709,091
2 Traction Power Distribution	Mile	\$ 1,170,000			0.61	
Subtota		,,				\$ 80,154,401
Program Implementation Costs (per screening)						\$ 20,439,372
Program Implementation Costs						
Contingencies (per screening) (25%)						\$ 20,038,600
Containgations (par sorverilling) (2070)						20,030,000
Subtotal	1	1				\$ 120,632,373
Cultitata (Danis da d)						¢ 121,000,000

Subtotal (Rounded) \$ 121,000,000

	5A (0.8	3 miles)			5B (1.7 miles)				5C (1.0 miles)	
Subsection 5	At Grade	Deep Tunnel (HST Only)	Aerial Viaduct	At Grade	Open Trench	Covered Trench/Tunnel	Deep Tunnel (HST Only)	At-Grade	Covered Trench/Tunnel	Deep Tunnel (HST Only)
	\$11 (4 tracks) \$9 (2 tracks)	\$151 (2 tracks)	\$ 178			\$833 (4 tracks) \$474 (2 tracks)	\$524 (2 tracks)		\$588 (4 tracks) \$610 (2 tracks)	\$671 (2 tracks)
Acquisition Cost of Permanent ROW	Highest	Lowest	Medium	Highest	Medium	Lowest	Lowest	Highest	Lowest	Lowest
	4 tracks - 1. Four tracks on existing Caltrain alignment. 2. Existing 4-track alignment. 2 tracks (2 HST)- 1. Two tracks on existing Caltrain alignment. 2. Must be combined with 2 track deep tunnel option.	2 tracks - 1. <i>Must be combined</i> with 2 track at grade option.	2 tracks - 1. Caltrain Atherton and Menlo Park stations. 2. Must be combined with 2 track deep	4 tracks - 1. Caltrain Atherton and Menlo Park stations; 2. Grade separations at Fair Oaks Lane, Watkins Ave, Encinal Ave, Glenwood Ave, Oak Grove Ave, and Ravenswood Ave. 2 tracks - 1. Grade separations at Fair Oaks Lane, Watkins Ave, Encinal Ave, Glenwood Ave, Oak Grove Ave, and Ravenswood Ave. 2. Must be combined with 2 track deep tunnel option.	1. Caltrain Atherton and Menlo Park stations; 2 tracks - 1. Caltrain Atherton and Menlo Park stations; 2. Must be combined	4 tracks - 1. Caltrain Atherton and Menlo Park stations; 2 tracks - 1. Caltrain Atherton and Menlo Park stations; 2. Must be combined with 2 track deep tunnel option.	2 tracks - 1. Must be combined with 2 track aerial viaduct, at grade, trench, or tunnel option.	4 tracks - No notes. 2 tracks - 1. <i>Must be combined</i> with 2 track deep tunnel option.	4 tracks - No notes. 2 tracks - 1. Must be combined with 2 track deep tunnel option.	2 tracks - 1. Must be combined with 2 track at grade, trench, or tunnel option.

COST ELEMENTS	UNIT	UNIT PRICE		At-Grade (2	2 tracks)			At-Grade (4 tracks)			Tunnel ((HST only)	
Subsection 5		Base: 2009 (3rd	Start: 1565 + 00	A End: 1605 + 00	0.76 M	iles	Start: 1565 + 00	A End: 1605 + 00	0.76 M	iles	Start: 1565 + 00	Start: 1605 + 00	A 0.76 Mi	les
Culturation Dataile		Quarter)	Otarti 1000 i 00	Endi 1000 1 00			Otal ti 1000 + 00	Enai 1000 1 00			Ottaiti 1000 + 00	Ottait 1000 1 00		0
Subsection Details Double Track At-Grade (Mile) Double Track Elevated (Mile) Double Track Tunnel (Mile) Double Track Trench (Mile)			Start: 1565 + 00 Start: 0 + 00 Start: 0 + 00 Start: 0 + 00	End: 1605 + 00	Quant. 0.76 Miles 0.00 Miles 0.00 Miles 0.00 Miles	Cost	Start: 0 + 00 Start: 0 + 00 Start: 0 + 00 Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles 0.00 Miles 0.00 Miles 0.00 Miles	Cost	Start: 0 + 00 Start: 0 + 00 Start: 1565 + 00 Start: 0 + 00	Start: 0 + 00 End: 0 + 00 End: 1605 + 00	Quant. 0.00 Miles 0.00 Miles 0.76 Miles 0.00 Miles	Cost
Four Track Construction/Reconstruction At-Grade (Mile) Four Track Elevated (Mile) Four Track Tunnel (Mile) Four Track Trench (Mile)			Start: 0 + 00 Start: 0 + 00 Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles 0.00 Miles 0.00 Miles		Start: 1565 + 00 Start: 0 + 00 Start: 0 + 00 Start: 0 + 00	End: 1605 + 00	0.76 Miles 0.00 Miles 0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00 Start: 0 + 00 Start: 0 + 00	End: 0 + 00 End: 0 + 00	0.00 Miles 0.00 Miles 0.00 Miles 0.00 Miles	
Double Track Section - Total 1 Double Track Section - At Grade 2 Double Track Section - On Structure 3 Double Track Section - In Tunnel or Subway 4 Double Track Section - In Trench	Mile Mile Mile Mile	\$ 2,100,224 \$ 4,700,160 \$ 4,700,160 \$ 4,700,160			0.76 5 0.00 5 0.00 5 0.00 5	-			0.00 \$ 0.00 \$ 0.00 \$ 0.00 \$	- 			0.00 \$ 0.00 \$ 0.76 Miles \$ 0.00 \$	3,560,727
Four Track Section - Total Four-track Section - At Grade Four-Track Section - On Structure Four-Track Section - In Tunnel or Subway Four-Track Section - In Trench	Mile Mile Mile Mile	\$ 4,200,448 \$ 9,400,320 \$ 9,400,320 \$ 9,400,320			0.00 S 0 S 0 S	- -			0.76 0 0 0 0.00	-			0.00 \$ 0 \$ 0.00 Miles \$ 0 \$	-
Single Track - Total 5 Single Track Section - At Grade 6 Single Track Section - On structure 7 Single Track Section - In Tunnel or Subway 8 Single Track Section - In Trench	Mile Mile Mile Mile	\$ 1,549,312 \$ 2,350,080 \$ 2,350,080 \$ 2,350,080			0 s 0 s 0 s	-			0 S 0 S 0 S	-			0 \$ 0 \$ 0 \$ 0 \$	-
9 Freight Double Track - At Grade 10 Freight Single Track - At Grade	Mile Mile	\$ 2,839,552 \$ 1,549,312			0 5				0 5				0 \$	
Earthwork Items 1 Site Preparation - Undeveloped 2 Total Cut 3 Total Fill 4 Borrow 5 Spoil 6 Landscape erosion Control 7 Security Fencing (Both sides of ROW) 8 Special Drainage Facilities	Acre CY CY CY CY Acre Mile 5% Ear	\$ 9,216 \$ 6.00 \$ 6.00 \$ 13.00 \$ 13.00 \$ 6,144 \$ 144,384			6.31 0.00 0.00 0.00 0.00 0.00 0.00 0.76 0.				6.31 5 0.00 5 0.00 5 0.00 6 0.00 6 6.31 6	5 - 5 - 5 - 5 38,769			0.00 \$ 0.00 \$ 0.00 \$ 0.00 \$ 0.00 \$ 0.00 \$ 0.00 \$ 0.00 \$ 0.00 \$ \$ 0.00 \$	- - - -
Structures, Tunnels, Walls 1 Standard Structure (2 tracks) Standard Structure (4 tracks) 2 High Structure 3 Lean Standard Structure	Mile Mile Mile Mile	\$ 34,972,672 \$ 52,459,008 \$ 40,424,448			0.00	-			0.00	-			0.00 \$ 0.00 \$	-
3 Long Span Structure 4 Waterway Crossing - Primary 5 Waterway Crossing - Secondary (Irrigation Canal) 6 Twin Single Track Drill&Blast (<6 Miles) 7 Twin Single Track TBM (<6 Miles) 8 Twin Single Track TBM w/3rd Tube (<6 Miles) 9 Double Track Drill & Blast 10 Double Track Mined (Soft Soil) Double Track TBM (<6 Miles) Double Track TBM w/3rd Tube (>6 Miles)	Mile Mile Mile Mile Mile Mile Mile Mile	\$ 61,919,232 \$ 85,342,208 \$ 92,049,408 \$ 142,731,264 \$ 106,637,312 \$ 176,720,896 \$ 146,887,680 \$ 79,200,000 \$ 106,637,312 \$ 176,720,896			0.00	- - -			0.00	- - -			\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	-
11 Seismic Chamber (Drill & Blast/Mined) 12 Crossovers 13 Cut & Cover Double Track Tunnel 14 Trench Long (2 tracks) (1000 ft+) Trench Long (4 tracks) (1000 ft+) 15 Trench Short (2 tracks) (<1000 ft)	ea ea Mile Mile Mile Mile	\$ 126,205,952 \$ 442,368 \$ 131,246,080 \$ 78,843,904 \$ 118,265,856 \$ 57,524,224			0.00 S 0.00 S 0.00 S				0.00 S 0.00 S 0.00 S				0.00 \$ 0.00 \$ 0.00 \$ \$	-
Trench Short (4 tracks) (<1000 ft) 16 Mechanical & Electrical for Tunnels 17 Retaining Walls 18 Containment Walls 19 Single Track Cut and Cover Subway Four Track Drill & Plact	Mile Mile Mile Mile Mile Mile	\$ 86,286,336 \$ 11,848,704 \$ 8,613,888 \$ 5,907,456 \$ 131,246,080 \$ 293,775,360			0.00 0.00				0.00				0.76 \$ 0.00 \$ 0.00 \$ \$	-
Four Track Drill & Blast Four Track Mined (Soft Soil) Four Track TBM (<6 Miles) Four Track TBM w/3rd Tube (>6 Miles) Four Track Cut & Cover Tunnel	Mile Mile Mile Mile	\$ 293,775,380 \$ 158,400,000 \$ 213,274,624 \$ 353,441,792 \$ 262,492,160			0.00				0.00				0.00 \$ 0.00 \$ 0.00 \$	- - -
Grade Separations Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban) Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Urban) Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Urban) Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped) Street Bridging HSR Trench	ea ea ea ea ea ea	\$ 13,284,352 \$ 19,926,528 \$ 2,759,680 \$ 2,029,568 \$ 3,563,520 \$ 3,593,216 \$ 2,850,816 \$ 3,171,328 \$ 1,398,784			0 9	- - - -			0 9				\$ 0 \$ \$ \$ \$ \$ \$ \$ \$	- - - - - - -

COST ELEMENTS	UNIT	UNIT PRICE		At-Grade (2 tracks)			At-Grade (4 tracks)			Tunnel	(HST only)		
Subsection 5		Base: 2009 (3rd		Α				А					Α		
		Quarter)	Start: 1565 + 00	End: 1605 + 00	0.76 Mi	les	Start: 1565 + 00	End: 1605 + 00	0.76	Miles	Start: 1565 + 00	Start: 1605 + 00	0.76	Miles	
Subsection Details		l			Quant.	Cost			Quant.	Cost		+	Quant.	(Cost
Double Track At-Grade (Mile)			Start: 1565 + 00	End: 1605 + 00	0.76 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	Start: 0 + 00	0.00 Miles		
Double Track Elevated (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Double Track Tunnel (Mile) Double Track Trench (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 1565 + 00 Start: 0 + 00	End: 1605 + 00	0.76 Miles 0.00 Miles	_	
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1565 + 00	End: 1605 + 00	0.76 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Elevated (Mile)			Start: 0 + 00	End. 0 1 00	0.00 Miles		Start: 0 + 00	End. 1000 1 00	0.00 Miles		Start: 0 + 00	End. 0 1 00	0.00 Miles		
Four Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Trench (Mile)		T	Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
8 Minor Crossing Closures	ea	\$ 87,040			\$	-				\$ -				\$	-
Building Items															
1 Intermediate Passenger Stations	Each	\$ -			\$	-				\$ -				\$	_
2 Terminal Passenger Stations	Each	\$ -			\$	-				\$ -				\$	-
Caltrain Passenger Station - At-Grade	Each	\$15,000,000			\$	-				\$ -				\$	-
Caltrain Passenger Station - On Structure	Each	\$15,000,000			\$	-				\$ -				\$	-
Caltrain Passenger Station - In Tunnel or Subway	Each	\$15,000,000			\$	-				\$ -			C	\$	-
Caltrain Passenger Station - In Trench 3 Maintenance Facility	Each	\$15,000,000 \$ 123,921,884			\$	-				\$ -				\$	-
4 Parking - Structures	Each space				\$	-				\$				\$	-
5 Parking - At Grade	space				Š	-				\$ -				\$	_
														,	
Rail & Utility Relocation		1													
1 Single Track Relocation (Temporary)	Mile	\$ 2,000,896			\$	-				\$ -				\$	-
2 Single Track Relocation (Permanent)	Mile	\$ 2,000,896			\$	-				\$ -				\$	-
3 Single Track Removal 4 Major Utility Relocations - Dense Urban	Mile Mile	\$ 130,048 \$ 1,548,288			\$	-				\$ -				\$	-
5 Major Utility Relocations - Derise Orban	Mile	\$ 1,084,416			\$	-				\$				\$	-
6 Major Utility Relocations - Dense Suburban	Mile	\$ 775,168			s s	-				\$ -				\$	-
7 Major Utility Relocations - Suburban	Mile	\$ 464,896			\$	-				\$ -				\$	-
8 Major Utility Relocations - Undeveloped	Mile	\$ 30,720			\$	-				\$ -				\$	-
ROW (Not Included)															
ROW required for each segment	^	¢ 270/221								*				.	
1 Dense Urban 2 Urban	Acre Acre	\$ 2,786,321 \$ 1,371,510			\$	-				\$ -				\$	-
3 Dense Suburban	Acre	\$ 908,134			\$					\$ -				\$	-
4 Suburban	Acre	\$ 208,418			\$					\$ -				\$	
5 Undeveloped	Acre	\$ 3,642			\$	-				\$ -				\$	-
ROW required for Temp. Construction Easement					\$	-				\$ -				\$	-
1 Dense Urban	Acre				\$	-				\$ -				\$	-
2 Urban 3 Dense Suburban	Acre Acre				\$	-				\$ -				\$	-
4 Suburban	Acre				\$	-				\$ -				\$	-
5 Undeveloped	Acre				\$	-				\$ -				\$	-
Right-of-Way Required for Stations, Maintenance & Parking Facilities	71010				Ť					Ť				Ť	
6 Dense Urban	Acre	\$ 2,786,321			\$					\$ -				\$	-
7 Urban	Acre	\$ 1,371,510			\$	-				\$ -				\$	-
8 Dense Suburban	Acre				\$	-				\$ -				\$	-
9 Suburban 10 Undeveloped	Acre Acre	\$ 208,418 \$ 3,642			\$	-				\$ - \$ -				\$	-
Environmental Mitigation = 3% Line Costs	Acre	ψ 3,042			\$	54,231				\$ 101,963					2,799,686
						01,201				101,700				,	_,,,,,,,,,,,,
System Elements		1													
1 Signaling (ATC)	Mile	\$ 2,070,000			0.76 \$				0.76				0.76		1,568,182
2 Communications (w/ Fiber Optic Backbone)	Mile	\$ 540,000			0.76 \$				0.76				0.76		409,091
3 Wayside Protection System	Mile	\$ 108,000			0.76 \$	81,818			0.76	\$ 81,818			0.76	2	81,818
Electrification Items		1													
1 Traction Power supply	Mile	\$ 1,170,000			0.76 \$	886,364			0.76	\$ 886,364			0.76	\$	886,364
2 Traction Power Distribution	Mile	\$ 1,485,000			0.76 \$	1,125,000			0.76	\$ 1,125,000			0.76	\$	1,125,000
Subtota					\$	5,932,383				\$ 7,571,194					00,193,001
Program Implementation Costs (per screening)		1			\$	1,512,758				\$ 1,930,654				\$	25,549,215
Program Implementation Costs		1													
Contingencies (per screening) (25%)		1			\$	1,483,096				\$ 1,892,798				\$	25,048,250
goriolos (por sociosimig) (2019)		1				., 100,070				.,0,2,7,0				,	_5,0.0,200
Subtotal	1	•			\$	8,928,236				\$ 11,394,647		-	•	\$ 1	50,790,466
Subtotal (Rounded)					4	9.000.000	I .			\$ 11.000.000	1				.000.000

 Subtotal (Rounded)
 \$ 9,000,000
 \$ 11,000,000
 \$ 151,000,000

COST ELEMENTS	UNIT	UNIT PRICE	Aerial (2 t	tracks)			Aerial (4 to	racks)			At-Grade (2	tracks)			At-Grade (4	4 tracks)	
Subsection 5		Base: 2009 (3rd	,	<u> </u>			, D	·			B	·			<u> </u>	·	
		Quarter)	Start: 1605 + 00 Start: 1695 + 00	17	0 Miles	Start: 1605 + 00	Start: 1695 + 00	1 70	0 Miles	Start: 1605 + 00		1.70 Miles		Start: 1605 + 00	B End: 1695 ± 00	1.70 Miles	
			Start. 1003 + 00 Start. 1073 + 00	1.7	o ivilles	Start. 1003 + 00	Start. 1075 + 00	1.70	0 Miles	Start: 1003 + 00	L110. 1073 + 00	1.70 WIIIC3		Start. 1005 + 00	L11d. 1075 + 00	1.70 WIIIC3	
Subsection Details				Quant.	Cost	0	0	Quant.	Cost	0	F 1	Quant.	Cost	0		Quant.	Cost
Double Track At-Grade (Mile) Double Track Elevated (Mile)			Start: 0 + 00 Start: 0 + 00 Start: 1605 + 00 End: 1695 + 00	0.00 Miles		Start: 0 + 00 Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 1605 + 00 Start: 0 + 00	End: 1695 + 00	1.70 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	
Double Track Elevated (Mile) Double Track Tunnel (Mile)			Start: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Trench (Mile)			Start: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	E 1 4/	0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile) Four Track Elevated (Mile)			Start: 0 + 00 End: 0 + 00 Start: 0 + 00 End: 0 + 00	0.00 Miles		Start: 0 + 00 Start: 1605 + 00	End: 0 + 00 End: 1695 + 00	0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 1605 + 00 Start: 0 + 00	End: 1695 + 00 End: 0 + 00	1.70 Miles 0.00 Miles	
Four Track Elevated (Mile) Four Track Tunnel (Mile)			Start: 0 + 00 End: 0 + 00	0.00 Miles		Start: 0 + 00	E110: 1095 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Trench (Mile)			Start: 0 + 00 0.00 Miles	0.00 Miles		Start: 0 + 00	0.00 Miles	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Section - Total 1 Double Track Section - At Grade	Mile	\$ 2,100,224		0.00				0.00 \$	•			1.70 \$	3,579,927			0.00 \$	
2 Double Track Section - At Grade 2 Double Track Section - On Structure	Mile	\$ 4,700,160		1.70	8,011,636			0.00 \$				0.00 \$	3,319,921			0.00 \$	-
3 Double Track Section - In Tunnel or Subway	Mile	\$ 4,700,160		0.00	-			0.00 \$	-			0.00 \$	-			0.00 \$	-
4 Double Track Section - In Trench	Mile	\$ 4,700,160		0.00	-			0.00 \$	-			0.00 \$	-			0.00 \$	-
Four Track Section - Total																	
Four-track Section - At Grade	Mile	\$ 4,200,448		0.00	-			0.00 \$				0.00 \$	-			1.70 \$	7,159,855
Four-Track Section - On Structure	Mile	\$ 9,400,320		0.00	-			1.70 \$				0.00 \$	-			0.00 \$	-
Four-Track Section - In Tunnel or Subway Four-Track Section - In Trench	Mile Mile	\$ 9,400,320		0.00	-			0.00 \$ 0.00 \$				0.00 \$	-			0.00 \$ 0.00 \$	-
II OUI-TIACK SECTION - III TICHCH	IVIIIE	\$ 9,400,320		0.00	-			0.00 \$	-			0.00 \$	-			0.00 \$	-
Single Track - Total																	
5 Single Track Section - At Grade 6 Single Track Section - On structure	Mile Mile	\$ 1,549,312 \$ 2,350,080		0.00 5	-			0.00 \$ 0.00 \$				0.00 \$ 0.00 \$	-			0.00 \$ 0.00 \$	-
7 Single Track Section - On Structure	Mile	\$ 2,350,080		0.00	, - ; -			0.00 \$				0.00 \$	-			0.00 \$	-
8 Single Track Section - In Trench	Mile	\$ 2,350,080		0.00	-			0.00 \$				0.00 \$	-			0.00 \$	-
0 Freight Double Track At Code	Mila	¢ 2020 FF0		0.00				0.00				0.00				0.00	
9 Freight Double Track - At Grade 10 Freight Single Track - At Grade	Mile Mile	\$ 2,839,552 \$ 1,549,312		0.00 5				0.00 \$ 0.00 \$				0.00 \$ 0.00 \$	-			0.00 \$ 0.00 \$	
To read the stage that we did		1,017,012		0.00				0.00				0.00				0.00	
Earthwork Items				01.50				01.50				0/ 50 4	0.1.100			0/ 50 4	
1 Site Preparation - Undeveloped 2 Total Cut	Acre CY	\$ 9,216 \$ 6.00		26.52 S 0.00 S	244,408			26.52 \$ 0.00 \$				26.52 \$ 0.00 \$	244,408			26.52 \$ 0.00 \$	244,408
3 Total Fill	CY	\$ 6.00		0.00	-			0.00 \$				0.00 \$				0.00 \$	
4 Borrow	CY	\$ 13.00		0.00	; -			0.00 \$	-			0.00 \$	-			0.00 \$	-
5 Spoil	CY	\$ 13.00		0.00				0.00 \$				0.00 \$				0.00 \$	
6 Landscape erosion Control 7 Security Fencing (Both sides of ROW)	Acre Mile	\$ 6,144 \$ 144,384		26.52 S 0.00 S	162,939			26.52 \$ 0.00 \$				26.52 \$ 1.70 \$	162,939 246,109			26.52 \$ 1.70 \$	162,939 246,109
8 Special Drainage Facilities	5% Earthwork	ψ 144,384		0.00	20,367			\$	20,367			\$	32,673			\$	32,673
					-,				.,				,				
Structures, Tunnels, Walls 1 Standard Structure (2 tracks)	Mile	\$ 34,972,672		1.70	59,612,509			0.00 \$	t t			0.00 \$				0.00 \$	
Standard Structure (2 tracks) Standard Structure (4 tracks)	Mile	\$ 34,972,672 \$ 52,459,008		0.00	0 07,012,0U9			1.70 \$				0.00 \$	-			0.00 \$	-
2 High Structure	Mile	\$ 40,424,448		5	-			\$	-			\$	-			\$	-
3 Long Span Structure	Mile	\$ 61,919,232			-			\$	-			\$	-			\$	-
4 Waterway Crossing - Primary 5 Waterway Crossing - Secondary (Irrigation Canal)	Mile Mile	\$ 85,342,208 \$ 92,049,408			_			•	-			¢	_			¢	
6 Twin Single Track Drill&Blast (<6 Miles)	Mile	\$ 142,731,264			,			\$	-			\$	-			\$	- [
7 Twin Single Track TBM (<6 Miles)	Mile	\$ 106,637,312			-			\$				\$	-			\$	-
8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile Mile	\$ 176,720,896		0.00	-			0.00	•			\$	-			\$	-
9 Double Track Drill & Blast 10 Double Track Mined (Soft Soil)	Mile	\$ 146,887,680 \$ 79,200,000		0.00				0.00 \$	-			0.00 \$	-			0.00 \$	- 1
Double Track TBM (<6 Miles)	Mile	\$ 106,637,312			·				,			J **	-				-
Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 176,720,896															
11 Seismic Chamber (Drill & Blast/Mined) 12 Crossovers	ea ea	\$ 126,205,952 \$ 442,368			-			\$	-			\$	-			\$	-
13 Cut & Cover Double Track Tunnel	Mile	\$ 131,246,080		0.00	, - ; -			0.00 \$	-			0.00 \$	-			0.00 \$	-
14 Trench Long (2 tracks) (1000 ft+)	Mile	\$ 57,524,224		0.00	-			0.00 \$				0.00 \$	-			0.00 \$	-
Trench Long (4 tracks) (1000 ft+)	Mile Mile	\$ 86,286,336		0.00				0.00				0.00				0.00	
15 Trench Short (2 tracks) (<1000 ft) Trench Short (4 tracks) (<1000 ft)	Mile	\$ 78,843,904 \$ 118,265,856			-				-			\$	-				-
16 Mechanical & Electrical for Tunnels	Mile	\$ 11,848,704			-			\$	-			\$	-			\$	-
17 Retaining Walls	Mile	\$ 8,613,888		0.00	-			0.00 \$				0.00 \$	-			0.00 \$	-
18 Containment Walls 19 Single Track Cut and Cover Subway	Mile Mile	\$ 5,907,456 \$ 131,246,080		0.00	-			0.00 \$	-			0.00 \$	-			0.00 \$	-
Four Track Drill & Blast	Mile	\$ 131,246,080			, - ; -			\$	-			\$	-			\$	-
Four Track Mined (Soft Soil)	Mile	\$ 158,400,000			-			\$	-			\$	-			\$	-
Four Track TBM (<6 Miles)	Mile	\$ 213,274,624															
Four Track TBM w/3rd Tube (>6 Miles) Four Track Cut & Cover Tunnel	Mile Mile	\$ 353,441,792 \$ 262,492,160		0.00	,			0.00 \$				0.00 \$				0.00 \$	
TOUR TRACK OUT & COVER TUITIET	IVIIIC	ψ ∠υ∠,47∠,100		0.00	, <u>-</u>			0.00 \$	-			0.00 \$	-			0.00 \$	-
Grade Separations																	
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$ 13,284,352			-			\$	-			\$	-			\$	-
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) 2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea ea	\$ 19,926,528 \$ 2,759,680		0 3				0 \$				0 \$	-			0 \$ 6 ¢	16,558,080
3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Jundeveloped)	ea	\$ 2,029,568			-			\$	-			6 \$	12,177,408			\$	-
4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 3,563,520			-			\$	-			\$	-			\$	-
5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$ 3,593,216			-			\$	-			\$	-			\$	-
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban) 6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea ea	\$ 2,850,816 \$ 3,171,328			-			\$				\$	-			\$	
of the standard of the standar	1 50	I # 0,1/1,020	T I	ı I.	1		1	ı I.º	-	ı	İ	i 4	-	1	1	1 I v	- 1

COST ELEMENTS	UNIT	UNIT PRICE		Aerial (2 t	tracks)			Aerial (4 tr	acks)			At-Grade (2	tracks)			At-Grade (4	4 tracks)	
Subsection 5		Base: 2009 (3rd		D				D				В				D		
		Quarter)	Start: 1605 + 00	Start: 1695 + 00	1.70	Miles	Start: 1605 + 00	Start: 1695 + 00	17	70 Miles	Start: 1605 + 00	End: 1695 + 00	1.70 Miles		Start: 1605 ± 00	End: 1695 + 00	1.70 Miles	
			Start: 1000 1 00	Start: 1070 1 00	1.70	WIICS	Start: 1000 1 00	Start: 1070 1 00	1.7	· · · · · · · · · · · · · · · · · · ·	Start: 1000 1 00	E11d. 1070 1 00	1.70 Willes		Start: 1000 1 00	End. 1070 1 00	1.70 1111103	
Subsection Details					Quant.	Cost			Quant.	Cost	CL 1 4/05 00	E 1 1/05 00	Quant.	Cost	61 1 0 00	F 1 0 00	Quant.	Cost
Double Track At-Grade (Mile) Double Track Elevated (Mile)			Start: 0 + 00 Start: 1605 + 00	Start: 0 + 00 End: 1695 + 00	0.00 Miles		Start: 0 + 00 Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 1605 + 00 Start: 0 + 00	End: 1695 + 00	1.70 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	
Double Track Lievated (Mile)			Start: 0 + 00	L1Id. 1073 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1605 + 00		1.70 Miles	
Four Track Elevated (Mile) Four Track Tunnel (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1605 + 00	End: 1695 + 00	1.70 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	
Four Track Trench (Mile)			Start: 0 + 00 Start: 0 + 00	0.00 Miles	0.00 Miles		Start: 0 + 00 Start: 0 + 00	0.00 Miles	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
7 Street Bridging HSR Trench	ea	\$ 1,398,784	Start. 0 + 00	0.00 1411103	\$	-	Start. 0 1 00	0.00 1411103	U.UU IVIIIUS	\$ -	Start. 0 1 00		0.00 1111103	\$ -	Start: 0 1 00		0.00 Miles	\$ -
8 Minor Crossing Closures	ea	\$ 87,040			\$	-				\$ -				\$ -				\$ -
Duth the self-series																		
Building Items 1 Intermediate Passenger Stations	Each	•								¢				•				¢ .
2 Terminal Passenger Stations	Each	\$ -			\$	-				\$ -				\$ -				\$ -
Caltrain Passenger Station - At-Grade	Each	\$15,000,000			\$	-				\$ -				\$ -			2	\$ 30,000,000
Caltrain Passenger Station - On Structure	Each	\$15,000,000			2 \$	30,000,000			2	\$ 30,000,000				\$ -				\$ -
Caltrain Passenger Station - In Tunnel or Subway	Each	\$15,000,000			\$	-				\$ -				\$ -				\$ -
Caltrain Passenger Station - In Trench	Each	\$15,000,000			\$	-				\$ -				\$ -				\$ -
3 Maintenance Facility 4 Parking - Structures	Each space	\$ 123,921,884			\$	-				\$ -				\$ -				\$ -
5 Parking - At Grade	space	\$ -			\$	-				\$ -				\$ - \$ -				\$ -
	- pass																	
Rail & Utility Relocation										•				•				•
1 Single Track Relocation (Temporary) 2 Single Track Relocation (Permanent)	Mile Mile	\$ 2,000,896 \$ 2,000,896			\$	-				\$ -				-				\$ -
3 Single Track Renoval	Mile	\$ 2,000,896			\$	-				\$ - \$ -				\$ - \$				\$ -
4 Major Utility Relocations - Dense Urban	Mile	\$ 1,548,288			\$	-				\$ -				\$ -				\$ -
5 Major Utility Relocations - Urban	Mile	\$ 1,084,416			\$	-				\$ -				\$ -				\$ -
6 Major Utility Relocations - Dense Suburban	Mile	\$ 775,168			\$	-			:	\$ -				\$ -				\$ -
7 Major Utility Relocations - Suburban	Mile	\$ 464,896			\$	-				\$ -				\$ -				\$ -
8 Major Utility Relocations - Undeveloped	Mile	\$ 30,720			\$	-				-				\$ -				\$ -
ROW (Not Included)																		
ROW required for each segment																		
1 Dense Urban	Acre	\$ 2,786,321			\$	-			:	\$ -				\$ -				\$ -
2 Urban	Acre	\$ 1,371,510			\$	-				\$ -				-				-
3 Dense Suburban 4 Suburban	Acre Acre	\$ 908,134 \$ 208,418			\$	-				\$ -				\$ -				\$ -
5 Undeveloped	Acre	\$ 3,642			\$	-				, - \$				\$ -				\$ -
ROW required for Temp. Construction Easement	71010	ψ 5,012			\$	-				\$ -				•				*
1 Dense Urban	Acre				В					В								
2 Urban	Acre				\$	-			:	\$ -				\$ -				\$ -
3 Dense Suburban	Acre				\$	-				\$ -				\$ -				\$ -
4 Suburban 5 Undeveloped	Acre Acre				\$	-				Ф -				\$ - ¢ .				\$ - ¢
Right-of-Way Required for Stations, Maintenance & Parking Facilities	Acre				4	_				φ -				.				y -
6 Dense Urban	Acre	\$ 2,786,321			\$:	\$ -				\$ -				\$ -
7 Urban	Acre	\$ 1,371,510			\$	-			:	-				\$ -				\$ -
8 Dense Suburban	Acre	\$ 908,134			\$	-				\$ -				\$ -				\$ -
9 Suburban 10 Undeveloped	Acre Acre	\$ 208,418 \$ 3,642			\$	-				» - \$				\$ - \$				\$ -
Environmental Mitigation = 3% Line Costs	7.0.0	5,042			\$	2,941,556				\$ 4,076,093				\$ 493,304				\$ 1,632,122
System Elements	B 4*1	¢ 0.070.007			4 70 3	0.500.405			4 70	d 0.500 1.5-				A 0.500 to-				A 0.500 to:
1 Signaling (ATC) 2 Communications (w/ Fiber Optic Backbone)	Mile Mile	\$ 2,070,000 \$ 540,000			1.70 \$ 1.70 \$	3,528,409 920,455			1.70 1.70				1.70 1.70				1.70 1.70	
3 Wayside Protection System	Mile	\$ 108,000			1.70 \$	184,091			1.70				1.70				1.70	
, , , , , , , , , , , , , , , , , , ,					""	.01,071			3									
Electrification Items		L																_
1 Traction Power Supply	Mile	\$ 1,170,000			1.70 \$	1,994,318			1.70				1.70				1.70	
2 Traction Power Distribution	Mile btotal	\$ 1,485,000		+	1.70 \$	2,531,250 110,151,939			1.70	\$ 2,531,250 \$ 149,104,366			1.70	\$ 2,531,250 \$ 26,095,291			1.70	\$ 2,531,250 \$ 65,194,708
Program Implementation Costs (per screening)	2.0.01				\$	28,088,744				\$ 38,021,613				\$ 6,654,299				\$ 16,624,651
Program Implementation Costs																		
0-41						07 507 005				d 07.07/.000				¢ / F00.000				¢ 1/000/33
Contingencies (per screening) (25%)					\$	27,537,985				\$ 37,276,092				\$ 6,523,823				\$ 16,298,677
Subtotal	L	I.			\$	165,778,668				\$ 224,402,071		1	1	\$ 39,273,413		<u> </u>	1	\$ 98,118,036
Subtotal (Rounded)				U		166 000 000	l	Ш		\$ 224,000,000	1			\$ 39,000,000	1		1	\$ 98,000,000

COST ELEMENTS	UNIT	UNIT PRICE		Open Trench (2 tracks)		Open Tre	nch (4 tracks)			Covered Tre	ench (2 tracks)			Covered Trench (4 tracks)
Subsection 5		Base: 2009 (3rd		R			R							R	
		Quarter)	Start: 1605 + 00	Start: 1695 + 00 1.	70 Miles	Start: 1605 + 00 Start: 1695 + 00	1.70	Miles	Start: 1605 + 00	Start: 1695 + 00	1.70 Mile	es	Start: 1605 + 00	Start: 1695 + 00	.70 Miles
Subsection Details				Quant.	Cost		Quant.	Cost			Quant.	Cost		Quant.	Cost
Double Track At-Grade (Mile)			Start: 0 + 00	Start: 0 + 00 0.00 Miles		Start: 0 + 00 Start: 0 + 00	0.00 Miles		Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 0 + 00	Start: 0 + 00	
Double Track Elevated (Mile) Double Track Tunnel (Mile)			Start: 0 + 00 Start: 0 + 00	0.00 Miles 0.00 Miles	\dashv	Start: 0 + 00 Start: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 1605 + 00	End: 1695 + 00	0.00 Miles 1.70 Miles		Start: 0 + 00 Start: 0 + 00	0.00 Miles 0.00 Miles	
Double Track Trench (Mile)			Start: 1605 + 00	End: 1695 + 00 1.70 Miles		Start: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 00	0.00 Miles		Start: 0 + 00	0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile) Four Track Elevated (Mile)			Start: 0 + 00 Start: 0 + 00	End: 0 + 00 0.00 Miles 0.00 Miles	=	Start: 0 + 00 End: 0 + 00 Start: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00 0.00 Miles 0.00 Miles	
Four Track Tunnel (Mile) Four Track Trench (Mile)			Start: 0 + 00 Start: 0 + 00	0.00 Miles End: 0 + 00 0.00 Miles		Start: 0 + 00 Start: 1605 + 00	0.00 Miles 1.70 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 1605 + 00 Start: 0 + 00	End: 1695 + 00 1.70 Miles	
Double Track Section - Total			Start. U + UU			Start. 1003 + 00 E110. 1043 + 00			Start. U + 00				Start. U + UU	0.00 WIIICS	
1 Double Track Section - At Grade 2 Double Track Section - On Structure	Mile Mile	\$ 2,100,224 \$ 4,700,160			00 \$ - 00 \$ -		0.00 0.00				0.00 \$ 0.00 \$	-		0.00 0.00	
3 Double Track Section - In Tunnel or Subway	Mile	\$ 4,700,160		0.	00 \$ -		0.00	\$ -			1.70 \$	8,011,636		0.00	\$
4 Double Track Section - In Trench	Mile	\$ 4,700,160		1.	70 \$ 8,011,636		0.00	\$ -			0.00 \$	-		0.00	\$
Four Track Section - Total					20 4			•							•
Four-track Section - At Grade Four-Track Section - On Structure	Mile Mile	\$ 4,200,448 \$ 9,400,320		0.1	00 \$ - 0 \$ -		0.00				0.00 \$	-		0.00	
Four-Track Section - In Tunnel or Subway	Mile	\$ 9,400,320		_	0 \$		0	\$ -			0.00 \$	-		1.70	\$ 16,023,273
Four-Track Section - In Trench	Mile	\$ 9,400,320		0.1	00 \$ -		1.70	\$ 16,023,273			0 \$	-		0	\$
Single Track - Total	Milo	\$ 1,549,312			0 4			¢			0.6				¢
5 Single Track Section - At Grade 6 Single Track Section - On structure	Mile Mile	\$ 2,350,080			0 \$		0	\$ - \$			0 \$	-		0 0	\$
7 Single Track Section - In Tunnel or Subway 8 Single Track Section - In Trench	Mile Mile	\$ 2,350,080 \$ 2,350,080			0 \$ -		0	\$ -			0 \$	-		0	\$ -
					J			φ -			0 \$	-			φ -
9 Freight Double Track - At Grade 10 Freight Single Track - At Grade	Mile Mile	\$ 2,839,552 \$ 1,549,312			0 \$ -		0	\$ - \$ -			0 \$	-		0	\$ \$
	IVIIIC	۱,۵ ۲۶ ۵۱۷ پ			-			-				-			-
Earthwork Items 1 Site Preparation - Undeveloped	Acre	\$ 9,216		22	73 \$ 209,455		22.73	\$ 209,455			22.73 \$	209,455		22.73	\$ 209,455
2 Total Cut	CY	\$ 6.00		733333.	33 \$ 4,400,000		733333.33	\$ 4,400,000			733333.33 \$	4,400,000		733333.33	
3 Total Fill 4 Borrow	CY CY	\$ 6.00 \$ 13.00			00 \$ - 00 \$ -		0.00 0.00				0.00 \$	-		0.00	\$ \$
5 Spoil	CY	\$ 13.00		733333.	33 \$ 9,533,333		733333.33	\$ 9,533,333			733333.33 \$	9,533,333		733333.33	\$ 9,533,333
6 Landscape erosion Control 7 Security Fencing (Both sides of ROW)	Acre Mile	\$ 6,144 \$ 144,384		22. 1.	73 \$ 139,636 70 \$ 246,109		22.73 1.70				22.73 \$ 0.00 \$	139,636		22.73 0.00	
8 Special Drainage Facilities	5% Earthwork				\$ 726,427			\$ 726,427			\$	714,121			\$ 714,121
Structures, Tunnels, Walls															
1 Standard Structure (2 tracks) Standard Structure (4 tracks)	Mile Mile	\$ 34,972,672 \$ 52,459,008		0.0 0.1	00 \$ -		0.00 0.00				0.00 \$ 0.00	-		0.00 0.00	\$
2 High Structure	Mile	\$ 40,424,448		0.	\$ -		0.00	\$ -			\$	-		0.00	\$ -
3 Long Span Structure 4 Waterway Crossing - Primary	Mile Mile	\$ 61,919,232 \$ 85,342,208			\$ -			\$ - \$ -			\$	-			\$ \$
5 Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$ 92,049,408			\$			\$ -			\$	-			\$ -
6 Twin Single Track Drill&Blast (<6 Miles) 7 Twin Single Track TBM (<6 Miles)	Mile Mile	\$ 142,731,264 \$ 106,637,312			\$ -			\$ - \$ -			\$	-			\$ -
8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$ 176,720,896			\$ -		0.00	\$ -			\$ 0.00	-		0.00	\$ -
9 Double Track Drill & Blast 10 Double Track Mined (Soft Soil)	Mile Mile	\$ 146,887,680 \$ 79,200,000		0.1	00 \$ -		0.00	\$ -			0.00 \$	-		0.00	\$ -
Double Track TBM (<6 Miles) Double Track TBM w/3rd Tube (>6 Miles)	Mile Mile	\$ 106,637,312 \$ 176,720,896													
11 Seismic Chamber (Drill & Blast/Mined)	ea	\$ 126,205,952			\$			\$ -			\$	-			\$ -
12 Crossovers 13 Cut & Cover Double Track Tunnel	ea Mile	\$ 442,368 \$ 131,246,080		0.0	\$ -		0.00	\$ - \$			1.70 \$	- 223,714,909		0.00	\$ \$
14 Trench Long (2 tracks) (1000 ft+)	Mile	\$ 57,524,224			00 \$ 70 \$ 98,052,655		0.00	\$ -			0.00 \$			0.00	\$
Trench Long (4 tracks) (1000 ft+) 15 Trench Short (2 tracks) (<1000 ft)	Mile Mile	\$ 86,286,336 \$ 78,843,904		0.1)U \$ -		1.70	\$ 147,078,982 \$ -			0.00	-		0.00	\$ -
Trench Short (4 tracks) (<1000 ft)	Mile	\$ 118,265,856		_	20 6							20.401.15=			
16 Mechanical & Electrical for Tunnels 17 Retaining Walls	Mile Mile	\$ 11,848,704 \$ 8,613,888		0.	00 \$ - 00 \$ -		0.00	\$ -			1.70 \$ 0.00 \$	20,196,655		1.70 0.00	\$
18 Containment Walls 19 Single Track Cut and Cover Subway	Mile Mile	\$ 5,907,456 \$ 131,246,080			00 \$ -		0.00				0.00 \$	-		0.00	\$
Four Track Drill & Blast	Mile	\$ 293,775,360			\$ -			\$ -			\$	-		0.00	\$ \$
Four Track Mined (Soft Soil) Four Track TBM (<6 Miles)	Mile Mile	\$ 158,400,000 \$ 213,274,624			\$			\$ -			\$	-			\$
Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 353,441,792													
Four Track Cut & Cover Tunnel	Mile	\$ 262,492,160		0.0	00 \$ -		0.00	\$ -			0.00 \$	-		1.70	\$ 447,429,818
Grade Separations															
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea ea	\$ 13,284,352 \$ 19,926,528			\$			\$ - \$ -			\$	-			\$ \$
2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$ 2,759,680			0 \$		0	\$ -			\$	-			\$ -
3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) 4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea ea	\$ 2,029,568 \$ 3,563,520			\$ -			\$ - \$ -			\$ 8	-			\$ \$
5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$ 3,593,216			\$			\$ -			\$	-			\$ -
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban) 6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea ea	\$ 2,850,816 \$ 3,171,328			\$ -			\$ - \$ -			\$	-			\$ - \$
	1	1 . 0,1,020	į	ı	1 *	1	1 1	•	į.	1			1		•

COST ELEMENTS	UNIT	UNIT PRICE		Open Tren	ch (2 tracks)		Open Tren	ch (4 tracks)			Covered Tre	ench (2 tracks)			Covered Trench (4 track	cs)
Subsection 5		Base: 2009 (3rd			D			D				D			D	
		Quarter)	Start: 1605 + 00	Start: 1695 + 00	1.70 Miles	3	Start: 1605 + 00 Start: 1695 + 00	1.70	Miles	Start: 1605 + 00	Start: 1695 + 00	1.70	Miles	Start: 1605 + 00	Start: 1695 + 00	1.70 Miles
Subsection Details Double Track At-Grade (Mile)			Start: 0 + 00	Start: 0 + 00	Quant. 0.00 Miles	Cost	Start: 0 + 00 Start: 0 + 00	Quant. 0.00 Miles	Cost	Start: 0 + 00	Start: 0 + 00	Quant. 0.00 Miles	Cost	Start: 0 + 00	Quant. Start: 0 + 00	Cost
Double Track Elevated (Mile)			Start: 0 + 00	Start. 0 + 00	0.00 Miles		Start: 0 + 00 Start: 0 + 00	0.00 Miles		Start: 0 + 00	Start. 0 + 00	0.00 Miles		Start: 0 + 00	0.00 Miles	3
Double Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 1605 + 00	End: 1695 + 00	1.70 Miles		Start: 0 + 00	0.00 Mile:	6
Double Track Trench (Mile)			Start: 1605 + 00	End: 1695 + 00	1.70 Miles		Start: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles	5
Four Track Construction/Reconstruction At-Grade (Mile) Four Track Elevated (Mile)			Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 End: 0 + 00 Start: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00 0.00 Mile:	5
Four Track Elevated (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1605 + 00	Fnd: 1695 + 00 1.70 Mile:	3
Four Track Trench (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1605 + 00 End: 1695 + 00	1.70 Miles		Start: 0 + 00	End. 0 1 00	0.00 Miles		Start: 0 + 00	0.00 Miles	3
7 Street Bridging HSR Trench	ea	\$ 1,398,784			0 \$	-		0	\$ -			0	\$ -			0 \$ -
8 Minor Crossing Closures	ea	\$ 87,040			\$	-			\$ -			0	\$ -			0 \$ -
Building Items																
1 Intermediate Passenger Stations	Each	\$ -			\$	-			\$ -				\$ -			\$ -
2 Terminal Passenger Stations	Each	\$ -			\$	-			\$ -				\$ -			\$ -
Caltrain Passenger Station - At-Grade	Each	\$15,000,000 \$15,000,000			\$	-			\$ -				\$ -			\$ -
Caltrain Passenger Station - On Structure Caltrain Passenger Station - In Tunnel or Subway	Each Each	\$15,000,000			\$	-			\$ -				\$ -			\$ -
Caltrain Passenger Station - In Trench	Each	\$15,000,000			2 \$	30,000,000		2	\$ 30,000,000			2	\$ 30,000,000			2 \$ 30,000,000
3 Maintenance Facility	Each	\$ 123,921,884			\$	-			\$ -				\$ -			\$ -
4 Parking - Structures	space	\$ -			\$	-			\$ -				\$ -			\$ -
5 Parking - At Grade	space	\$ -			\$	-			> -				-			2 -
Rail & Utility Relocation																
1 Single Track Relocation (Temporary)	Mile	\$ 2,000,896			\$	-			\$ -				\$ -			\$ -
2 Single Track Relocation (Permanent)	Mile	\$ 2,000,896			\$	-			\$ -				\$ -			\$ -
3 Single Track Removal 4 Major Utility Relocations - Dense Urban	Mile Mile	\$ 130,048 \$ 1,548,288			\$	-			\$ -				\$ -			\$ -
5 Major Utility Relocations - Dense orban	Mile	\$ 1,084,416			\$	-			\$ -				\$ -			\$ -
6 Major Utility Relocations - Dense Suburban	Mile	\$ 775,168			\$	-			\$ -				\$ -			\$ -
7 Major Utility Relocations - Suburban	Mile	\$ 464,896			\$	-			\$ -				\$ -			\$ -
8 Major Utility Relocations - Undeveloped	Mile	\$ 30,720			\$	-			\$ -				\$ -			-
ROW (Not Included)																
ROW required for each segment																
1 Dense Urban 2 Urban	Acre Acre	\$ 2,786,321 \$ 1,371,510			\$	-			\$ -				-			-
3 Dense Suburban	Acre	\$ 908,134			\$				\$ -				\$ -			\$ -
4 Suburban	Acre	\$ 208,418			\$				\$ -				\$ -			\$ -
5 Undeveloped	Acre	\$ 3,642			\$				\$ -				-			-
ROW required for Temp. Construction Easement 1 Dense Urban	Acre				\$				\$ -				-			\$ -
2 Urban	Acre				\$				\$ -				\$ -			\$ -
3 Dense Suburban	Acre				\$				\$ -				\$ -			\$ -
4 Suburban	Acre				\$	-			\$ -				\$ -			\$ -
5 Undeveloped Dight of Way Dequired for Stations, Maintenance & Parking Facilities	Acre				\$				\$ -				-			\$ -
Right-of-Way Required for Stations, Maintenance & Parking Facilities 6 Dense Urban	Acre	\$ 2,786,321			\$				\$ -				\$ -			S -
7 Urban	Acre	\$ 1,371,510			\$				\$ -				\$ -			\$ -
8 Dense Suburban	Acre	\$ 908,134			\$	-			\$ -				\$ -			\$ -
9 Suburban 10 Undeveloped	Acre Acre	\$ 208,418 \$ 3,642			\$				\$ -				-			\$ -
Environmental Mitigation = 3% Line Costs	Acre	\$ 3,042			\$	4,539,578			\$ 6,250,716				\$ 8,907,592			\$ 15,859,389
System Elements 1 Signaling (ATC)	Mile	\$ 2,070,000			1.70 \$	3,528,409		1.70	\$ 3,528,409			1.70	\$ 3,528,409		1.7	0 \$ 3,528,409
2 Communications (w/ Fiber Optic Backbone)	Mile	\$ 540,000			1.70 \$	920,455		1.70				1.70			1.7	
3 Wayside Protection System	Mile	\$ 108,000			1.70 \$	184,091		1.70				1.70				0 \$ 184,091
Electrification Items																
1 Traction Power supply	Mile	\$ 1,170,000			1.70 \$	1,994,318		1.70	\$ 1,994,318			1.70	\$ 1,994,318		1.7	0 \$ 1,994,318
2 Traction Power Distribution	Mile	\$ 1,485,000			1.70 \$	2,531,250		1.70	\$ 2,531,250			1.70	\$ 2,531,250		1.7	0 \$ 2,531,250
Subt	total			_	\$	165,017,351		J	\$ 223,766,454			Ι Π	\$ 314,985,861			\$ 553,664,202
Program Implementation Costs (per screening) Program Implementation Costs					*	42,079,425			\$ 57,060,446				\$ 80,321,394			\$ 141,184,372
Contingencies (per screening) (25%)					\$	41,254,338			\$ 55,941,613				\$ 78,746,465			\$ 138,416,051
Subtotal				1	\$	248,351,114		I I	\$ 336,768,513		<u> </u>		\$ 474,053,720			\$ 833,264,625
Subtotal (Rounded)						48,000,000			\$ 337,000,000				\$ 474,000,000			\$ 833,000,000
Subtotal (Noutlack)					Ψ 2	10,000,000			\$ 331,000,000				Ψ 1/1/000/000			ψ 000,000,000

COST ELEMENTS	UNIT	UNIT PRICE		Tunnel (HST only)	
ubsection 5		Base: 2009 (3rd Quarter)			В	
		Quartery	Start: 1605 + 00	Start: 1695 + 00	1.70 Mi	les
handing Datella					Overst	04
ubsection Details ouble Track At-Grade (Mile)			Start: 0 + 00	Start: 0 + 00	Quant. 0.00 Miles	Cost
ouble Track Elevated (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles	
ouble Track Tunnel (Mile)			Start: 1605 + 00	End: 1695 + 00	1.70 Miles	
puble Track Trench (Mile)			Start: 0 + 00	F 1 0 00	0.00 Miles	
our Track Construction/Reconstruction At-Grade (Mile) our Track Elevated (Mile)			Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	
our Track Tunnel (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles	
our Track Trench (Mile)			Start: 0 + 00		0.00 Miles	
Double Track Section - Total		A 0.400.004			0.00	
1 Double Track Section - At Grade 2 Double Track Section - On Structure	Mile Mile	\$ 2,100,224 \$ 4,700,160			0.00 \$ 0.00 \$	
3 Double Track Section - On Structure	Mile	\$ 4,700,160			1.70 Miles \$	8,011,63
4 Double Track Section - In Trench	Mile	\$ 4,700,160			0.00 \$	
Four Track Section - Total	Mile	¢ 4 200 440			0.00 ¢	
Four-track Section - At Grade Four-Track Section - On Structure	Mile Mile	\$ 4,200,448 \$ 9,400,320			0.00 \$	
Four-Track Section - In Tunnel or Subway	Mile	\$ 9,400,320			0.00 Miles \$	-
Four-Track Section - In Trench	Mile	\$ 9,400,320			0 \$	
Single Track - Total 5 Single Track Section - At Grade	Mile	\$ 1,549,312			0 \$	
6 Single Track Section - At Grade 6 Single Track Section - On structure	Mile	\$ 2,350,080			0 \$	
7 Single Track Section - In Tunnel or Subway	Mile	\$ 2,350,080			0 \$	
8 Single Track Section - In Trench	Mile	\$ 2,350,080			0 \$	
P Freight Double Track At Crade	Mile	¢ 2020 EE2			0 ¢	
9 Freight Double Track - At Grade D Freight Single Track - At Grade	Mile	\$ 2,839,552 \$ 1,549,312			0 \$	
7 Traight Shighe Hack 7tt Grade	Willie	Ψ 1,017,012			J 4	
Earthwork Items						
1 Site Preparation - Undeveloped	Acre	\$ 9,216			0.00 \$	
2 Total Cut 3 Total Fill	CY	\$ 6.00 \$ 6.00			0.00 \$ 0.00 \$	
4 Borrow	CY	\$ 13.00			0.00 \$	
5 Spoil	CY	\$ 13.00			0.00 \$	
6 Landscape erosion Control	Acre	\$ 6,144			0.00 \$	
7 Security Fencing (Both sides of ROW)	Mile	\$ 144,384			0.00 \$	
8 Special Drainage Facilities	5% Earthwork				\$	
Structures, Tunnels, Walls						
1 Standard Structure (2 tracks)	Mile	\$ 34,972,672			0.00 \$	
Standard Structure (4 tracks)	Mile	\$ 52,459,008			0.00	
2 High Structure 3 Long Span Structure	Mile	\$ 40,424,448			\$	
a Long Span Structure 4 Waterway Crossing - Primary	Mile Mile	\$ 61,919,232 \$ 85,342,208			\$	
Waterway Crossing - Finiary Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$ 92,049,408			\$	
6 Twin Single Track Drill&Blast (<6 Miles)	Mile	\$ 142,731,264			\$	
7 Twin Single Track TBM (<6 Miles)	Mile	\$ 106,637,312			\$	
8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile Mile	\$ 176,720,896			\$	
9 Double Track Drill & Blast D Double Track Mined (Soft Soil)	Mile	\$ 146,887,680 \$ 79,200,000			0.00 \$ 0.00 \$	
Double Track TBM (<6 Miles)	Mile	\$ 106,637,312			0.00 \$	
Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 176,720,896			1.70 \$	301,228,80
1 Seismic Chamber (Drill & Blast/Mined)	ea	\$ 126,205,952			\$	
2 Crossovers	ea Mile	\$ 442,368			0.00	
3 Cut & Cover Double Track Tunnel 4 Trench Long (2 tracks) (1000 ft+)	Mile Mile	\$ 131,246,080 \$ 57,524,224			0.00 \$ 0.00 \$	
Trench Long (4 tracks) (1000 ft+)	Mile	\$ 86,286,336	1		0.00 \$	
Trench Short (2 tracks) (<1000 ft)	Mile	\$ 78,843,904			\$	
Trench Short (4 tracks) (<1000 ft)	Mile	\$ 118,265,856				
6 Mechanical & Electrical for Tunnels	Mile	\$ 11,848,704			1.70 \$	20,196,65
7 Retaining Walls 8 Containment Walls	Mile Mile	\$ 8,613,888 \$ 5,907,456			0.00 \$ 0.00 \$	
9 Single Track Cut and Cover Subway	Mile	\$ 131,246,080			\$	
Four Track Drill & Blast	Mile	\$ 293,775,360			\$	
Four Track Mined (Soft Soil)	Mile	\$ 158,400,000			0.00 \$	
Four Track TBM (<6 Miles) Four Track TBM w/3rd Tube (>6 Miles)	Mile Mile	\$ 213,274,624 \$ 353,441,792			0.00 \$	
· · · ·	Mile	\$ 262,492,160			0.00 \$	
Four Track Cut & Cover Tunnel		, , , , , , , , , ,				
Four Track Cut & Cover Tunnel						
Grade Separations						
Grade Separations 1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$ 13,284,352 \$ 10,026,529			\$	
Grade Separations 1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$ 19,926,528			\$	
Grade Separations 1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) 2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)		\$ 19,926,528 \$ 2,759,680			0 \$	
Grade Separations 1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea ea	\$ 19,926,528 \$ 2,759,680 \$ 2,029,568 \$ 3,563,520			0 \$ \$ \$ \$	
Grade Separations 1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) 2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) 3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea ea ea	\$ 19,926,528 \$ 2,759,680 \$ 2,029,568			0 \$	

COST ELEMENTS	UNIT	UNIT PRICE		Tunnel (HST only)		
Subsection 5		Base: 2009 (3rd			D		
		Quarter)	Start: 1605 + 00	Start: 1695 + 00	B 170) Miles	
			Start: 1000 1 00	Start: 1070 1 00	1.70	, wiics	
Subsection Details					Quant.	Cost	
Double Track At-Grade (Mile) Double Track Elevated (Mile)			Start: 0 + 00 Start: 0 + 00	Start: 0 + 00 End: 0 + 00	0.00 Miles 0.00 Miles	-	
Double Track Elevated (Mile)			Start: 1605 + 00	End: 1695 + 00	1.70 Miles		
Double Track Tench (Mile)			Start: 0 + 00	Liid. 1075 + 00	0.00 Miles	1	
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Elevated (Mile)			Start: 0 + 00		0.00 Miles		
Four Track Tunnel (Mile) Four Track Trench (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		
7 Street Bridging HSR Trench	ea	\$ 1,398,784	Start: 0 + 00		0.00 Miles	\$	-
8 Minor Crossing Closures	ea	\$ 87,040			0	'	-
Building Items							
1 Intermediate Passenger Stations 2 Terminal Passenger Stations	Each Each	\$ - \$ -				\$	-
Caltrain Passenger Station - At-Grade	Each	\$15,000,000				\$	-
Caltrain Passenger Station - On Structure	Each	\$15,000,000			0	1 '	-
Caltrain Passenger Station - In Tunnel or Subway	Each	\$15,000,000			0	Ψ	-
Caltrain Passenger Station - In Trench	Each	\$15,000,000				\$	-
Maintenance Facility Parking - Structures	Each	\$ 123,921,884 \$ -				\$	-
5 Parking - At Grade	space space	\$ -				\$	-
3						1	
Rail & Utility Relocation	l						
1 Single Track Relocation (Temporary)	Mile	\$ 2,000,896				\$	-
2 Single Track Relocation (Permanent) 3 Single Track Removal	Mile Mile	\$ 2,000,896 \$ 130,048				\$	-
4 Major Utility Relocations - Dense Urban	Mile	\$ 1,548,288				\$	-
5 Major Utility Relocations - Urban	Mile	\$ 1,084,416				\$	-
6 Major Utility Relocations - Dense Suburban	Mile	\$ 775,168				\$	-
7 Major Utility Relocations - Suburban	Mile	\$ 464,896				\$	-
8 Major Utility Relocations - Undeveloped	Mile	\$ 30,720				\$	-
ROW (Not Included)							
ROW required for each segment							
1 Dense Urban	Acre	\$ 2,786,321				\$	-
2 Urban	Acre	\$ 1,371,510				\$	-
3 Dense Suburban 4 Suburban	Acre Acre	\$ 908,134 \$ 208,418				\$	-
5 Undeveloped	Acre	\$ 3,642				\$	
ROW required for Temp. Construction Easement		7 2,7 .2				\$	-
1 Dense Urban	Acre					\$	-
2 Urban	Acre					\$	-
3 Dense Suburban 4 Suburban	Acre Acre					\$	-
5 Undeveloped	Acre					\$	
Right-of-Way Required for Stations, Maintenance & Parking Facilities	7.6.0					Ť	
6 Dense Urban	Acre	\$ 2,786,321				\$	-
7 Urban	Acre	\$ 1,371,510				\$	-
8 Dense Suburban 9 Suburban	Acre Acre	\$ 908,134 \$ 208,418				\$	
10 Undeveloped	Acre	\$ 3,642				\$	
Environmental Mitigation = 3% Line Costs		5,512				\$ 9,883,11	13
System Elements	Mile	¢ 2.070.000			4 70	¢ 2.520.40	00
1 Signaling (ATC) 2 Communications (w/ Fiber Optic Backbone)	Mile Mile	\$ 2,070,000 \$ 540,000			1.70 1.70		
3 Wayside Protection System	Mile	\$ 108,000			1.70		
Electrification Items	l						_
1 Traction Power Supply	Mile	\$ 1,170,000			1.70		
2 Traction Power Distribution Subtota	Mile	\$ 1,485,000		1	1.70	\$ 2,531,25 \$ 348,478,72	
Program Implementation Costs (per screening)	1					\$ 88,862,07	
Program Implementation Costs							
]	
Contingencies (per screening) (25%)						\$ 87,119,68	82
Cultotal				1	l	¢ 504.4/0.4/	02
Subtotal						\$ 524,460,48	రర

Subtotal (Rounded) \$ 524,000,000



COST ELEMENTS	UNIT	UNIT PRICE		At-Grade (2	2 tracks)			At-Grade (4	tracks)			Covered Tre	nch (2 tracks)			Covered Tr	rench (4 tracks)	
Subsection 5		Base: 2009 (3rd		C				C					<u> </u>				C	
		Quarter)	Start: 1695 + 00	End: 1765 + 00	1.33	Miles	Start: 1695 + 00	End: 1765 + 00	1.33 Mi	les	Start: 1695 + 00	Start: 1765 + 00	1.33 Mile:	S	Start: 1695 + 00	Start: 1765 + 00	1.33 Mil	les
Subsection Details Double Track At-Grade (Mile)			Start: 1695 + 00	End: 1765 + 00	Quant. 1.33 Miles	Cost	Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost	Start: 0 + 00	Start: 0 + 00	Quant. 0.00 Miles	Cost	Start: 0 + 00	Start: 0 + 00	Quant. 0.00 Miles	Cost
Double Track Elevated (Mile)			Start: 0 + 00	End. 1703 1 00	0.00 Miles		Start: 0 + 00	Elia. 0 + 00	0.00 Miles		Start: 0 + 00	Start. 0 1 00	0.00 Miles		Start: 0 + 00	Start. 0 1 00	0.00 Miles	
Double Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1695 + 00	End: 1765 + 00	1.33 Miles		Start: 0 + 00		0.00 Miles	
Double Track Trench (Mile) Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 1695 + 00	End: 1765 + 00	0.00 Miles 1.33 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	
Four Track Elevated (Mile)			Start: 0 + 00	Ella. 0 1 00	0.00 Miles		Start: 0 + 00	E11d. 1703 1 00	0.00 Miles		Start: 0 + 00	Elia. 0 1 00	0.00 Miles		Start: 0 + 00	Elia. 0 1 00	0.00 Miles	
Four Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1695 + 00	End: 1765 + 00	1.33 Miles	
Four Track Trench (Mile) Double Track Section - Total		T	Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
1 Double Track Section - At Grade	Mile	\$ 2,100,224			1.33	\$ 2,784,388	3		0.00 \$	-			0.00 \$	-			0.00 \$	
2 Double Track Section - On Structure	Mile	\$ 4,700,160			0.00	\$	-		0.00 \$	-			0.00 \$	-			0.00 \$	
3 Double Track Section - In Tunnel or Subway 4 Double Track Section - In Trench	Mile Mile	\$ 4,700,160 \$ 4,700,160			0.00 0.00	\$			0.00 \$	-			1.33 \$ 0.00 \$	6,231,273			0.00 \$ 0.00 \$	
4 Double Hack Section - III Hench	IVIIIC	\$ 4,700,100			0.00	Ψ			0.00 \$				0.00 \$				0.00 \$	
Four Track Section - Total																		
Four-track Section - At Grade Four-Track Section - On Structure	Mile Mile	\$ 4,200,448 \$ 9,400,320			0.00 0.00	\$			1.33 \$ 0.00 \$	5,568,776			0.00 \$	-			0.00 \$	
Four-Track Section - In Tunnel or Subway	Mile	\$ 9,400,320			0.00	\$			0.00 \$	-			0.00 \$	-			1.33 \$	12,462,545
Four-Track Section - In Trench	Mile	\$ 9,400,320			0.00				0.00 \$	-			0 \$	-			0 \$	
Single Track - Total																		
5 Single Track - Total 5 Single Track Section - At Grade	Mile	\$ 1,549,312			0.00		.		0.00 \$				0 \$	-			0 \$	
6 Single Track Section - On structure	Mile	\$ 2,350,080			0.00	\$.		0.00 \$	-			0 \$	-			0 \$	-
7 Single Track Section - In Tunnel or Subway 8 Single Track Section - In Trench	Mile Mile	\$ 2,350,080			0.00 0.00		-		0.00 \$	-			0 \$	-			0 \$	-
O Single Hack Section - III Hellell	IVIIIE	\$ 2,350,080			0.00	Ψ	1		0.00 \$, -			0 \$	-			"	-
9 Freight Double Track - At Grade	Mile	\$ 2,839,552			0.00		.		0.00 \$	-			0 \$	-			0 \$	
10 Freight Single Track - At Grade	Mile	\$ 1,549,312			0.00	\$	· [0.00 \$	-			0 \$	-			0 \$	-
Earthwork Items																		
1 Site Preparation - Undeveloped	Acre	\$ 9,216			13.89)		13.89 \$	128,010			17.68 \$	162,909			17.68 \$	162,909
2 Total Cut 3 Total Fill	CY CY	\$ 6.00 \$ 6.00			0.00 0.00	\$	-		0.00 \$ 0.00 \$	-			570370.37 \$	3,422,222			570370.37 \$	3,422,222
4 Borrow	CY	\$ 13.00			0.00	\$			0.00 \$	-			0.00 \$	-			0.00 \$	-
5 Spoil	CY	\$ 13.00			0.00	\$			0.00 \$	-			570370.37 \$	7,414,815			570370.37 \$	7,414,815
6 Landscape erosion Control	Acre	\$ 6,144			13.89 1.33				13.89 \$	85,340			17.68 \$	108,606			17.68 \$	108,606
7 Security Fencing (Both sides of ROW) 8 Special Drainage Facilities	Mile 5% Earti	\$ 144,384 hwork			1.33	\$ 191,418 \$ 20,238			1.33 \$	191,418 20,238			0.00 \$	555,428			0.00 \$	555,428
						,			ľ									****
Structures, Tunnels, Walls	N 4:1-	¢ 24.072.772			0.00	•			0.00				0.00				0.00	
1 Standard Structure (2 tracks) Standard Structure (4 tracks)	Mile Mile	\$ 34,972,672 \$ 52,459,008			0.00 0.00		•		0.00 \$	-			0.00 \$ 0.00	-			0.00 \$	-
2 High Structure	Mile	\$ 40,424,448				\$			\$	-			\$	-			\$	-
3 Long Span Structure	Mile Mile	\$ 61,919,232				\$	-		\$	-			\$	-			\$	-
4 Waterway Crossing - Primary 5 Waterway Crossing - Secondary (Irrigation Canal)		\$ 85,342,208 \$ 92,049,408				\$	-		\$	-			\$	-			\$	
6 Twin Single Track Drill&Blast (<6 Miles)	Mile	\$ 142,731,264				\$			\$	-			\$	-			\$	
7 Twin Single Track TBM (<6 Miles)		\$ 106,637,312				\$	-		\$	-			\$	-			\$	
8 Twin Single Track TBM w/3rd Tube (<6 Miles) 9 Double Track Drill & Blast	Mile Mile	\$ 176,720,896 \$ 146,887,680			0.00	\$			0.00 \$	-			1.33 \$	194,737,455			0.00 \$	
10 Double Track Mined (Soft Soil)	Mile	\$ 79,200,000				\$			\$	-			\$	-			\$	
Double Track TBM (<6 Miles)	Mile Mile	\$ 106,637,312																
Double Track TBM w/3rd Tube (>6 Miles) 11 Seismic Chamber (Drill & Blast/Mined)		\$ 176,720,896 \$ 126,205,952				\$			\$	-			\$	-			\$	
12 Crossovers	ea	\$ 442,368				\$			\$	-			\$	-			\$	
13 Cut & Cover Double Track Tunnel 14 Trench Long (2 tracks) (1000 ft+)	Mile Mile	\$ 131,246,080 \$ 57,524,224			0.00 0.00	\$	-		0.00 \$	-			1.33 \$ 0.00 \$	174,000,485			0.00 \$ 0.00 \$	
Trench Long (4 tracks) (1000 ft+)	Mile	\$ 86,286,336			0.00	•			0.00				0.00 \$	-			0.00 \$	•
15 Trench Short (2 tracks) (<1000 ft)		\$ 78,843,904				\$	-		\$	-			\$	-			\$	
Trench Short (4 tracks) (<1000 ft) 16 Mechanical & Electrical for Tunnels	Mile Mile	\$ 118,265,856 \$ 11,848,704				¢												
17 Retaining Walls	Mile	\$ 8,613,888			0.00	\$.		0.00 \$	-			0.00 \$	-			0.00 \$	-
18 Containment Walls	Mile	\$ 5,907,456			0.00	\$	· [0.00 \$	-			0.00 \$	-	1		0.00 \$	
19 Single Track Cut and Cover Subway Four Track Drill & Blast	Mile Mile	\$ 131,246,080 \$ 293,775,360				\$:[\$	-			\$	-	1		0.00 \$	
Four Track Mined (Soft Soil)	Mile	\$ 158,400,000				\$.		\$	- -			\$	-			\$	
Four Track TBM (<6 Miles)	Mile	\$ 213,274,624					1								1			
Four Track TBM w/3rd Tube (>6 Miles) Four Track Cut & Cover Tunnel	Mile Mile	\$ 353,441,792 \$ 262,492,160			0.00	\$.]		0.00 \$				0.00 \$				1.33 \$	348,000,970
Toda Trada Out & Cover Turiner	MILE	Ψ 202, Τ /2, 100			0.00	*			0.00				0.00	-			1.55	370,000,770
Grade Separations		4 40 004 5				•												
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea ea	\$ 13,284,352 \$ 19,926,528			n	\$:[) \$	-			\$	-			\$	-
2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$ 2,759,680			0	\$.		0 \$	- -			\$	-	1		\$	
3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$ 2,029,568				\$	· [\$	-			\$	-			\$	
4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban) 5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea ea	\$ 3,563,520 \$ 3,593,216				\$:1		\$	-			\$	-			\$	
Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 3,593,216				\$.		\$	-			\$	-			\$	
6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)		\$ 3,171,328				\$. [Š	-			\$	_			l s	_

COST ELEMENTS	UNIT	UNIT PRICE		At-Grade (2 tracks)			At-Grade (4 tracks)			Covered Tren	ich (2 tracks)			Covered Trea	nch (4 tracks)	
Subsection 5		Base: 2009 (3rd		C				C								,	C	
		Quarter)	Start: 1695 + 00	End: 1765 + 00	1.33 N	Miles	Start: 1695 + 00	End: 1765 + 00	1.33 [Miles	Start: 1695 + 00	Start: 1765 + 00	1.33	Miles	Start: 1695 + 00	Start: 1765 + 00	1.33	Miles
			Start: 1073 1 00	E11d. 1703 1 00	1.55 N	ilics	Start: 1075 1 00	E11d: 1705 1 00	1.551	VIIICS	Start: 1073 1 00	Start. 1703 1 00	1.55	WIIIC3	Start: 1073 1 00	Start: 1703 1 00	1.33	WIICS
Subsection Details		•			Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile) Double Track Elevated (Mile)			Start: 1695 + 00	End: 1765 + 00	1.33 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 0 + 00	Start: 0 + 00	0.00 Miles	
Double Track Elevated (Mile) Double Track Tunnel (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 1695 + 00	End: 1765 + 00	0.00 Miles 1.33 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	
Double Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	Liiu. 1703 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1695 + 00	End: 1765 + 00	1.33 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 1695 + 00	End: 1765 + 00	1.33 Miles 0.00 Miles	
Four Track Trench (Mile) 7 Street Bridging HSR Trench	ea	\$ 1,398,784	Start: 0 + 00		0.00 Miles	\$ -	Start: 0 + 00		0.00 Miles	\$ -	Start: 0 + 00		0.00 Miles	\$ -	Start: 0 + 00		0.00 Miles	\$ -
8 Minor Crossing Closures	ea	\$ 87,040				\$ -				\$ -			0	\$ -			0	\$ -
Building Items																		
1 Intermediate Passenger Stations 2 Terminal Passenger Stations	Each Each					\$ -				\$ -				\$ -				-
Caltrain Passenger Stations - At-Grade	Each					\$ - \$				\$ -				\$ -				• - • -
Caltrain Passenger Station - On Structure	Each					\$ -				\$ -				\$ -				\$ -
Caltrain Passenger Station - In Tunnel or Subway	Each	\$15,000,000				\$ -				\$ -				\$ -			:	\$ -
Caltrain Passenger Station - In Trench	Each					-				\$ -				\$ -				\$ -
3 Maintenance Facility 4 Parking - Structures	Each					\$ -				\$ -				\$ -				\$ -
5 Parking - At Grade	space space					\$ - \$ -				\$ -				\$ -				\$ -
	Space					•											J.	•
Rail & Utility Relocation																		
1 Single Track Relocation (Temporary)	Mile	\$ 2,000,896				\$ -				\$ -				\$ -				\$ -
2 Single Track Relocation (Permanent) 3 Single Track Removal	Mile Mile	\$ 2,000,896 \$ 130,048				\$ - ¢				\$ -				\$ -				\$ - ¢ -
4 Major Utility Relocations - Dense Urban	Mile	\$ 1,548,288				\$ -				\$ -				\$ -				\$ -
5 Major Utility Relocations - Urban	Mile	\$ 1,084,416				\$ -				\$ -				\$ -				\$ -
6 Major Utility Relocations - Dense Suburban	Mile	\$ 775,168				\$ -				\$ -				\$ -				\$ -
7 Major Utility Relocations - Suburban	Mile	\$ 464,896				\$ -				\$ -				\$ -				\$ -
8 Major Utility Relocations - Undeveloped	Mile	\$ 30,720				\$ -				\$ -				\$ -				-
ROW (Not Included)																		
ROW required for each segment																		
1 Dense Urban	Acre					\$ -				\$ -				\$ -			:	-
2 Urban 3 Dense Suburban	Acre Acre	\$ 1,371,510 \$ 908,134				\$ -				\$ -				\$ -				-
4 Suburban	Acre	\$ 208,418				\$ -				\$ -				\$ -				\$ \$
5 Undeveloped	Acre	\$ 3,642				\$ -				\$ -				\$ -				\$ -
ROW required for Temp. Construction Easement						\$ -				\$ -				\$ -			:	\$ -
1 Dense Urban	Acre					В				В				\$ -				-
2 Urban 3 Dense Suburban	Acre Acre					\$ -				\$ -				\$ -				\$ - ¢
4 Suburban	Acre					\$ -				\$ -				\$ -				\$ -
5 Undeveloped	Acre					\$ -				\$ -				\$ -			:	\$ -
Right-of-Way Required for Stations, Maintenance & Parking Facilities																		
6 Dense Urban		\$ 2,786,321				\$ -				\$ -				\$ -				\$ •
7 Urban 8 Dense Suburban	Acre Acre	\$ 1,371,510 \$ 908,134				\$ - \$ -				\$ -				\$ - \$				\$ - \$ -
9 Suburban	Acre	\$ 208,418				\$ -				\$ -				\$ -				\$ -
10 Undeveloped	Acre	\$ 3,642				\$ -				\$ -				\$ -			:	\$ -
Environmental Mitigation = 3% Line Costs						\$ 96,282				\$ 179,813				\$ 11,598,996			!	\$ 11,163,825
System Elements																		
1 Signaling (ATC)	Mile	\$ 2,070,000			1.33	\$ 2,744,318			1.33				1.33	\$ 2,744,318			1.33	\$ 2,744,318
2 Communications (w/ Fiber Optic Backbone)	Mile	\$ 540,000			1.33				1.33				1.33	\$ 715,909			1.33	\$ 715,909
3 Wayside Protection System	Mile	\$ 108,000			1.33	\$ 143,182			1.33	\$ 143,182			1.33	\$ 143,182			1.33	\$ 143,182
Electrification Items																		
1 Traction Power supply	Mile	\$ 1,170,000			1.33	\$ 1,551,136			1.33	\$ 1,551,136			1.33	\$ 1,551,136			1.33	\$ 1,551,136
2 Traction Power Distribution	Mile	\$ 1,485,000			1.33	\$ 1,968,750			1.33	\$ 1,968,750			1.33	\$ 1,968,750			1.33	\$ 1,968,750
Subto	otal					\$ 10,428,972				\$ 13,296,892				\$ 405,355,483				
Program Implementation Costs (per screening)						\$ 2,659,388				\$ 3,390,707				\$ 103,365,648				\$ 99,555,727
Program Implementation Costs																		
Contingencies (per screening) (25%)						\$ 2,607,243				\$ 3,324,223				\$ 101,338,871				\$ 97,603,654
																	_	
Subtotal						\$ 15,695,603				\$ 20,011,822				\$ 610,060,002				\$ 587,573,996
Subtotal (Doundod)			•			¢ 16,000,000		•		¢ 20 000 000		•		¢ 610 000 000				\$ 500 000 000

COST ELEMENTS	UNIT	UNIT PRICE		Tunnel (HST only)		
ubsection 5		Base: 2009 (3rd			С		
		Quarter)	Start: 1695 + 00	Start: 1765 + 00		Miles	
ubsection Details ouble Track At-Grade (Mile)			Ctt 0 00	Ct+ 0 00	Quant.		Cost
ouble Track At-Grade (Mile)			Start: 0 + 00 Start: 0 + 00	Start: 0 + 00 End: 0 + 00	0.00 Miles 0.00 Miles		
puble Track Tunnel (Mile)			Start: 1695 + 00	End: 1765 + 00	1.33 Miles		
ouble Track Trench (Mile)			Start: 0 + 00		0.00 Miles		
ur Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		
ur Track Elevated (Mile) ur Track Tunnel (Mile)			Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		
ur Track Turiner (Mile) ur Track Trench (Mile)			Start: 0 + 00	E110: 0 + 00	0.00 Miles		
Double Track Section - Total			otarti o i oo		0.00 1111100		
1 Double Track Section - At Grade	Mile	\$ 2,100,224			0.00		
2 Double Track Section - On Structure	Mile	\$ 4,700,160			0.00 1.33 Miles		())1)
3 Double Track Section - In Tunnel or Subway 4 Double Track Section - In Trench	Mile Mile	\$ 4,700,160 \$ 4,700,160			0.00		6,231,2
Bouble Hack Section in Helich	IVIIIC	4,700,100			0.00	Ψ	
Four Track Section - Total							
Four-track Section - At Grade	Mile	\$ 4,200,448			0.00		
Four-Track Section - On Structure	Mile	\$ 9,400,320			0	*	
Four-Track Section - In Tunnel or Subway Four-Track Section - In Trench	Mile Mile	\$ 9,400,320 \$ 9,400,320			0.00 Miles	\$ \$	-
Four-mack Section - III Hench	IVIIIe	\$ 9,400,320			U	Þ	
Single Track - Total							
5 Single Track Section - At Grade	Mile	\$ 1,549,312				\$	
Single Track Section - On structure	Mile	\$ 2,350,080			0	*	
7 Single Track Section - In Tunnel or Subway	Mile	\$ 2,350,080			0	\$	
B Single Track Section - In Trench	Mile	\$ 2,350,080			0	\$	
Freight Double Track - At Grade	Mile	\$ 2,839,552			0	\$	
Freight Single Track - At Grade	Mile	\$ 1,549,312			Ö	\$	
Earthwork Items							
1 Site Preparation - Undeveloped 2 Total Cut	Acre	\$ 9,216			0.00		
3 Total Fill	CY	\$ 6.00 \$ 6.00			0.00 0.00		
4 Borrow	CY	\$ 13.00			0.00		
Spoil	CY	\$ 13.00			0.00		
6 Landscape erosion Control	Acre	\$ 6,144			0.00		
7 Security Fencing (Both sides of ROW)	Mile	\$ 144,384			0.00		
B Special Drainage Facilities	5% Eart	inwork I				\$	
Structures, Tunnels, Walls							
1 Standard Structure (2 tracks)	Mile	\$ 34,972,672			0.00	\$	
Standard Structure (4 tracks)	Mile	\$ 52,459,008			0.00		
High Structure	Mile	\$ 40,424,448				\$	
3 Long Span Structure 4 Waterway Crossing - Primary	Mile Mile	\$ 61,919,232 \$ 85,342,208				\$	
Waterway Crossing - Finally Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$ 92,049,408				\$	
5 Twin Single Track Drill&Blast (<6 Miles)	Mile	\$ 142,731,264				\$	
7 Twin Single Track TBM (<6 Miles)	Mile	\$ 106,637,312				\$	
Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$ 176,720,896				\$	
Double Track Drill & Blast	Mile	\$ 146,887,680			0.00		
Double Track Mined (Soft Soil) Double Track TBM (<6 Miles)	Mile Mile	\$ 79,200,000 \$ 106,637,312			0.00 0.00		
Double Track TBM (<6 Miles) Double Track TBM w/3rd Tube (<6 Miles)	Mile	\$ 106,637,312			1.33		234,289,0
Seismic Chamber (Drill & Blast/Mined)	ea	\$ 126,205,952				\$,,
2 Crossovers	ea	\$ 442,368				\$	
3 Cut & Cover Double Track Tunnel	Mile	\$ 131,246,080			1.33		174,000,4
4 Trench Long (2 tracks) (1000 ft+)	Mile	\$ 57,524,224			0.00		
Trench Long (4 tracks) (1000 ft+) Trench Short (2 tracks) (<1000 ft)	Mile Mile	\$ 86,286,336 \$ 78,843,904			0.00	\$	
Trench Short (4 tracks) (<1000 ft)	Mile	\$ 118,265,856				Ψ	
Mechanical & Electrical for Tunnels	Mile	\$ 11,848,704				\$	
Retaining Walls	Mile	\$ 8,613,888			1.33		11,419,9
Containment Walls	Mile	\$ 5,907,456			0.00		
Single Track Cut and Cover Subway Four Track Drill & Blast	Mile	\$ 131,246,080				\$ \$	
Four Track Drill & Blast Four Track Mined (Soft Soil)	Mile Mile	\$ 293,775,360 \$ 158,400,000			0.00	*	
Four Track TBM (<6 Miles)	Mile	\$ 213,274,624			0.00		
Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 353,441,792				\$	
Four Track Cut & Cover Tunnel	Mile	\$ 262,492,160			0.00	\$	
Crada Caparationa							
Grade Separations Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$ 13,284,352				\$	
Thousand Stossing fish 4 Lane Roadway Office 2 Hacks (Orball)	ea	\$ 19,926,528				\$	
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)					0		
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) 2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$ 2,759,680					
2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) 3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea ea	\$ 2,029,568				\$	
2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) 3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) 4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea ea	\$ 2,029,568 \$ 3,563,520				\$	
2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) 3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$ 2,029,568					

	COST ELEMENTS	UNIT	UNIT PRICE		Tunnel (I	HST only)		
Sul	osection 5		Base: 2009 (3rd		·			
			Quarter)	Start: 1695 + 00	Start: 1765 + 00	C 1.33	Mile	S
				otal t. 1070 1 00	Start: 1700 1 00	1.00	IVIIIC	3
	section Details ible Track At-Grade (Mile)			Start: 0 + 00	Start: 0 + 00	Quant. 0.00 Miles		Cost
	ible Track Elevated (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		
	ıble Track Tunnel (Mile)			Start: 1695 + 00	End: 1765 + 00	1.33 Miles		
	ıble Track Trench (Mile) ır Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		
	r Track Elevated (Mile)			Start: 0 + 00	Elia. 0 + 00	0.00 Miles		
	r Track Tunnel (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		
	r Track Trench (Mile) Street Bridging HSR Trench	ea	\$ 1,398,784	Start: 0 + 00		0.00 Miles 0	\$	_
	Minor Crossing Closures	ea	\$ 87,040			0		-
	Building Items							
	Intermediate Passenger Stations	Each	\$ -				\$	-
	Terminal Passenger Stations	Each	\$ -				\$	-
	Caltrain Passenger Station - At-Grade Caltrain Passenger Station - On Structure	Each Each	\$15,000,000 \$15,000,000				\$	-
	Caltrain Passenger Station - In Tunnel or Subway	Each	\$15,000,000				\$	-
	Caltrain Passenger Station - In Trench	Each	\$15,000,000				\$	-
	Maintenance Facility Parking - Structures	Each space	\$ 123,921,884 \$ -				\$	-
	Parking - At Grade	space					\$	-
	Rail & Utility Relocation							
	Single Track Relocation (Temporary)	Mile	\$ 2,000,896				\$	-
	Single Track Relocation (Permanent)	Mile	\$ 2,000,896				\$	-
	Single Track Removal Major Utility Relocations - Dense Urban	Mile Mile	\$ 130,048 \$ 1,548,288				\$	-
	Major Utility Relocations - Urban	Mile	\$ 1,084,416				\$	-
	Major Utility Relocations - Dense Suburban	Mile	\$ 775,168				\$	-
	Major Utility Relocations - Suburban Major Utility Relocations - Undeveloped	Mile Mile	\$ 464,896 \$ 30,720				\$	-
Ĭ	major oung resistants of activities		\$ 00,720				*	
	ROW (Not Included)							
1	ROW required for each segment Dense Urban	Acre	\$ 2,786,321				\$	-
2	Urban	Acre	\$ 1,371,510				\$	-
	Dense Suburban Suburban	Acre Acre	\$ 908,134 \$ 208,418				\$	-
	Undeveloped	Acre	\$ 3,642				\$	-
١.	ROW required for Temp. Construction Easement	١.					\$	-
	Dense Urban Urban	Acre Acre					\$	-
	Dense Suburban	Acre					\$	-
	Suburban	Acre					\$	-
	Undeveloped Right-of-Way Required for Stations, Maintenance & Parking Facilities	Acre					\$	-
6	Dense Urban	Acre	\$ 2,786,321				\$	-
	Urban Dense Suburban	Acre Acre	\$ 1,371,510 \$ 908,134				\$	
	Suburban	Acre	\$ 208,418				\$	-
10	Undeveloped	Acre	\$ 3,642				\$	10.770.000
	Environmental Mitigation = 3% Line Costs						\$	12,778,223
	System Elements							
	Signaling (ATC) Communications (w/ Fiber Optic Backbone)	Mile Mile	\$ 2,070,000 \$ 540,000			1.33 1.33		2,744,318 715,909
	Wayside Protection System	Mile	\$ 108,000			1.33		143,182
	Floatrification Hama							
1	Electrification Items Traction Power supply	Mile	\$ 1,170,000			1.33	\$	1,551,136
	Traction Power Distribution	Mile	\$ 1,485,000			1.33	\$	1,968,750
	Subtotal Program Implementation Costs (per screening)						\$	445,842,270 113,689,779
	Program Implementation Costs (per screening) Program Implementation Costs						Þ	113,009,779
								444 410 51=
	Contingencies (per screening) (25%)						\$	111,460,567
	Subtotal	l	I				\$	670,992,616
	Cultatata (Danisata d)						٠	71 000 000

Subtotal (Rounded) \$ 671,000,000

		6A (1.2 miles)				6B (0.7 miles)		
Subsection 6	At Grade	Covered Trench/Tunnel	Deep Tunnel (HST Only)	Aerial Viaduct	At Grade	Open Trench	Covered Trench/Tunnel	Deep Tunnel (HST Only)
Capital Cost (\$2009 in Millions) does not include ROW	\$75 (4 tracks) \$48 (2 tracks)	\$599	\$242 (2 tracks)	\$ 52	\$41 (4 tracks) \$39 (2 tracks)	\$ 123	\$321	\$137 (2 tracks)
Acquisition Cost of Permanent ROW	Highest	Lowest	Lowest	Medium	Highest	Medium	Lowest	Lowest
Notes:	Palo Alto station (costs not included). tracks - Grade separation at Palo Alto Avenue.	Ave, Homer (Pedestrian) Ave, and Embarcadero Road. 2. Caltrain Palo Alto station. 3. Potential HST Palo Alto station (costs not included).	2 tracks - 1. Caltrain two tracks to remain at grade. 2. No potential HST Palo Alto station. 3. Must be combined with 2 track at grade option.		4 tracks - No notes 2 tracks - 1. Grade separation at Churchill Avenue. 2. Must be combined with 2 track deep tunnel option.			2 tracks - 1. Caltrain two tracks to remain at grade or aerial viaduct. 2. Must be combined with 2 track aerial viaduct or at grade option.

			6C (1.4 miles)					6D (0.6 miles)		
Subsection 6	Aerial Viaduct	At Grade	Open Trench	Covered Trench/Tunnel	Deep Tunnel (HST Only)	Aerial Viaduct	At Grade	Open Trench	Covered Trench/Tunnel	Deep Tunnel (HST Only)
Capital Cost (\$2009 in Millions) does not include ROW	\$ 133 <u>171</u> (4 tracks) \$122 (2 tracks)	\$46 (4 tracks) \$18 (2 tracks)	\$ 278 <u>263</u>	\$694	\$284 (2 tracks)	\$ <mark>44 <u>59</u> (4 tracks) \$40 (2 tracks)</mark>	\$ 112 <u>72</u> (4 tracks) \$ 72 <u>70</u> (2 tracks)	\$ 112 <u>105</u>	\$272	\$114 (2 tracks)
Acquisition Cost of Permanent ROW	Medium	Highest	Medium	Lowest	Lowest	Medium	Highest	Medium	Lowest	Lowest
	4 tracks - No notes 2 tracks - 1. Caltrain California Avenue station. 2. Must be combined with 2 track deep tunnel option.	4 tracks - No notes 2 tracks - 1. Caltrain California Avenue station. 2. Must be combined with 2 track deep tunnel option.	Avenue station. 2. Raise Oregon	 Caltrain California Avenue station. Raise Oregon Expressway. 	2 tracks - 1. Caltrain two tracks to remain at grade or aerial viaduct. 2. Must be combined with 2 track aerial viaduct or at grade option.	4 tracks - No notes 2 tracks - 1. <i>Must be</i> combined with 2 track deep tunnel option.	4 tracks - 1. Grade separation at East Meadow Drive and Charleston Road. 2 tracks - 1. Grade separation at East Meadow Drive and Charleston Road. 2. Must be combined with 2 track deep tunnel option.			2 tracks - 1. Caltrain two tracks to remain at grade or aerial viaduct. 2. Must be combined with 2 track aerial viaduct or at grade option.

COST ELEMENTS	UNIT	UNIT PRICE		At-Grad	e (2 tracks)			At-Grade (4	tracks)			Covered Tre	ench (4 tracks)			Tunnel ((HST only)	
Subsection 6		Base: 2009			Α			Α					A				A	
		(3rd Quarter)	Start: 1765 + 00	End: 1829 + 00	1.21	Miles	Start: 1765 + 00 En	nd: 1829 + 00	1.21 Miles	5	Start: 1765 + 00	End: 1829 + 00	1.21 Mile	es	Start: 1765 + 00	End: 1829 + 00	1.21	Miles
Subsection Details					Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile)				End: 1829 + 00	1.21 Miles			End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Tunnel (Mile) Double Track Trench (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 1765 + 00 Start: 0 + 00	End: 1829 + 00	1.21 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00		0.00 Miles 0.00 Miles			nd: 1829 + 00	1.21 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles 0.00 Miles	
Four Track Elevated (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00	10. 1027 1 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1765 + 00	End: 1829 + 00	1.21 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Trench (Mile) Double Track Section - Total			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
1 Double Track Section - At Grade	Mile	\$ 2,100,224			1.21	\$ 2,545,726			0.00 \$	_			0 \$	_			0.00	\$
2 Double Track Section - On Structure	Mile	\$ 4,700,160			0.00	\$ -			0.00 \$	-			0 \$	-			0.00	
3 Double Track Section - In Tunnel or Subway	Mile	\$ 4,700,160			0.00	\$ -			0.00 \$	-			0 \$	-			1.21	\$ 5,697,16
4 Double Track Section - In Trench	Mile	\$ 4,700,160			0.00	\$ -			0.00 \$	-			0 \$	-			0.00	\$
Four Track Section - Total																		
Four-track Section - At Grade	Mile	\$ 4,200,448			0.000000	\$ -			1.21 \$	5,091,452			0.00 \$	-			0.00	\$
Four-Track Section - On Structure	Mile	\$ 9,400,320			0	\$ -			0 \$	-			0.00 \$	-			0.00	
Four-Track Section - In Tunnel or Subway Four-Track Section - In Trench	Mile Mile	\$ 9,400,320			0	\$ -			0 \$	-			1.21 \$ 0.00 \$	11,394,327			0.00 0.00	
Four-track Section - In Trench	Iville	\$ 9,400,320			U	•			0 \$	-			0.00 \$	-			0.00	\$
Single Track - Total																		
5 Single Track Section - At Grade	Mile	\$ 1,549,312			0	\$ -			0 \$	-			0 \$	-			0	\$
6 Single Track Section - On structure	Mile	\$ 2,350,080			0	-			0 \$	-			0 \$	-			0	\$
7 Single Track Section - In Tunnel or Subway 8 Single Track Section - In Trench	Mile Mile	\$ 2,350,080 \$ 2,350,080			0	\$ - \$			0 \$	-			0 \$	-			0	\$
Opingie Hack Section - III Hellon	iville	ψ ∠,330,000			١	- -			0 \$	-			0 3	-			U	v
9 Freight Double Track - At Grade	Mile	\$ 2,839,552			0	\$ -			0 \$	-			0 \$	-			0	\$
10 Freight Single Track - At Grade	Mile	\$ 1,549,312			0	-			0 \$	-			0 \$	-			0	\$
Earthwork Items																		
1 Site Preparation - Undeveloped	Acre	\$ 9,216			9.55	\$ 88,013			16.16 \$	148,945			16.16 \$	148,945			0.00	\$
2 Total Cut	CY	\$ 6.00			0.00	\$ -			0.00 \$	-			1042962.96 \$	6,257,778			0.00	
3 Total Fill	CY	\$ 6.00			0.00	\$ -			0.00 \$	-			521481.48 \$	3,128,889			0.00	
4 Borrow 5 Spoil	CY	\$ 13.00 \$ 13.00			0.00 0.00				0.00 \$ 0.00 \$	-			0.00 \$ 521481.48 \$	6,779,259			0.00 0.00	
6 Landscape erosion Control	Acre	\$ 6,144			0.00				0.00 \$	-			0.00 \$	0,779,239			0.00	
7 Security Fencing (Both sides of ROW)	Mile	\$ 144,384			1.21				1.21 \$	175,011			0.00 \$	-			0.00	
8 Special Drainage Facilities	5% Ear	thwork				\$ 13,151			\$	16,198			\$	815,744				\$
Structures, Tunnels, Walls																		
1 Standard Structure (2 tracks)	Mile	\$ 34,972,672			0.00 Miles	\$ -			0.00 Miles \$	-			0.00 Miles \$	-			0.00 Miles	\$
Standard Structure (4 tracks)	Mile	\$ 52,459,008			0.00 Miles				0.00 Miles				0.00 Miles				0.00 Miles	
2 High Structure	Mile	\$ 40,424,448				\$ -			\$	-			\$	-				\$
3 Long Span Structure 4 Waterway Crossing - Primary	Mile Mile	\$ 61,919,232 \$ 85,342,208				\$ - \$			\$	-			\$	-				\$
5 Waterway Crossing - Finnary 5 Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$ 92,049,408			0.02	\$ 1,743,360			0.02 \$	1,743,360			\$	-			0.01	\$ 697,344
6 Twin Single Track Drill&Blast (<6 Miles)	Mile	\$ 142,731,264				\$ -			\$	-			\$	-				\$
7 Twin Single Track TBM (<6 Miles)	Mile	\$ 106,637,312				\$ -			\$	-			\$	-				\$
8 Twin Single Track TBM w/3rd Tube (<6 Miles) 9 Double Track Drill & Blast	Mile Mile	\$ 176,720,896 \$ 146,887,680			0	\$ -			0 \$	-			\$	-			0.00	\$
10 Double Track Mined (Soft Soil)	Mile	\$ 79,200,000				\$ -			\$	-			\$				0.00	
Double Track TBM (<6 Miles)	Mile	\$ 106,637,312				\$ -			\$	-							1.21	\$ 129,257,348
Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 176,720,896				\$ -			\$	-							0.00	\$
11 Seismic Chamber (Drill & Blast/Mined) 12 Crossovers	ea ea	\$ 126,205,952 \$ 442,368				\$ - \$			\$	-			\$	-				\$
13 Cut & Cover Double Track Tunnel	Mile	\$ 131,246,080			0	\$ -			0 \$	-			0.00 \$	-			0.00	\$
14 Trench Long (2 tracks) (1000 ft+)	Mile	\$ 57,524,224			0.00 Miles	\$ -			0.00 Miles \$	-			0.00 \$	-			0.00	
Trench Long (4 tracks) (1000 ft+)	Mile Mile	\$ 86,286,336			0.00 Miles	•			0.00 Miles				0.00				0.00	•
15 Trench Short (2 tracks) (<1000 ft) Trench Short (4 tracks) (<1000 ft)	Mile Mile	\$ 78,843,904 \$ 118,265,856				-			\$	-			\$	-				\$
16 Mechanical & Electrical for Tunnels	Mile	\$ 118,205,850			0	\$ -			0 \$	-			1.21 \$	14,362,065			1.21	\$ 14,362,065
17 Retaining Walls	Mile	\$ 8,613,888			0	\$ -			0 \$	-			0.00 \$	-			0.00	
18 Containment Walls	Mile	\$ 5,907,456				\$ -			\$	-			\$	-				\$
19 Single Track Cut and Cover Subway Four Track Drill & Blast	Mile Mile	\$ 131,246,080 \$ 293,775,360				\$ -			\$	-			0.00 \$	-				\$
Four Track Mined (Soft Soil)	Mile	\$ 293,775,360				* - \$ -			\$	-			0.00 \$	-			0.00	\$
Four Track TBM (<6 Miles)	Mile	\$ 213,274,624				\$ -			\$	-							0.00	
Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 353,441,792				\$ -			\$	-								\$
Four Track Cut & Cover Tunnel	Mile	\$ 262,492,160			0.00	-			0.00 \$	-			1.21 \$	318,172,315			0.00	\$
Grade Separations																		
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$ 13,284,352				\$ -			\$	-			\$	-				\$
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$ 19,926,528			1	\$ 19,926,528			1 \$	19,926,528			\$	-				\$
2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$ 2,759,680				\$ -			\$	-			\$	-				\$
3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) 4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea ea	\$ 2,029,568 \$ 3,563,520				\$ -			\$	-			\$	-				\$ \$
5 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Glbair)	ea	\$ 3,593,216				\$ -			\$	-			\$	-				\$
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 2,850,816				\$ -			\$	-			\$	-				\$
6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$ 3,171,328				-			\$	-			\$	4 407 050				\$
7 Street Bridging HSR Trench	ea	\$ 1,398,784	I	1	1 1	-	I I	I	\$	-	l l		3 \$	4,196,352	1	1	l l	\$

COST ELEMENTS	UNIT	UNIT PRICE		At-Grade	e (2 tracks)			At-Grad	le (4 tracks)			Covered Tre	ench (4 tracks)			Tunnel (F	HST only)	
Subsection 6		Base: 2009			A				Α				A				4	
		(3rd Quarter)	Start: 1765 + 00	End: 1829 + 00	1.21	Miles	Start: 1765 + 00	End: 1829 + 00	1.21	Miles	Start: 1765 + 00	End: 1829 + 00	1.21	1 Miles	Start: 1765 + 00	End: 1829 + 00	1.21	Miles
Subsection Details					Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile)			Start: 1765 + 00	End: 1829 + 00	1.21 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile) Double Track Tunnel (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	-	Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	-	Start: 0 + 00 Start: 1765 + 00	End: 0 + 00 End: 1829 + 00	0.00 Miles 1.21 Miles	
Double Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	LIIU. 1027 + 00	0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00		0.00 Miles		Start: 1765 + 00	End: 1829 + 00	1.21 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Elevated (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Tunnel (Mile) Four Track Trench (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 1765 + 00 Start: 0 + 00	End: 1829 + 00 End: 0 + 00	1.21 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00 End: 0 + 00	0.00 Miles 0.00 Miles	
8 Minor Crossing Closures	ea	\$ 87,040	Start. 0 + 00		0.00 Miles	\$ -	Start. 0 + 00		0.00 Miles	\$ -	Start. 0 + 00	E110. 0 + 00	0.00 Miles	\$ -	Start. 0 + 00	E110. 0 + 00	0.00 Miles	\$ -
	50	4 07/010				•				Ť				Ť				•
Building Items																		
1 Intermediate Passenger Stations		\$ -				\$ -				-				-				\$ -
2 Terminal Passenger Stations Caltrain Passenger Station - At-Grade	Each Each	\$15,000,000			0	\$ -			1	\$ 15,000,000				\$ -				\$ - ¢ -
Caltrain Passenger Station - On Structure	Each	\$15,000,000			0	\$ -			'	\$ 13,000,000				\$ -				\$ -
Caltrain Passenger Station - In Tunnel or Subway	Each	\$15,000,000				\$ -				\$ -				\$ -			0	\$ -
Caltrain Passenger Station - In Trench	Each	\$15,000,000				\$ -				\$ -			1	\$ 15,000,000			:	\$ -
3 Maintenance Facility	Each	\$ 123,921,884				\$ -				-				-				-
4 Parking - Structures 5 Parking - At Grade	space	\$ -				-								-				\$ -
SIF AINING - AL GIAUE	space	φ -				φ -				· -				φ -]	φ -
Rail & Utility Relocation																		
1 Single Track Relocation (Temporary)	Mile	\$ 2,000,896				\$ -				\$ -				\$ -				\$ -
2 Single Track Relocation (Permanent)	Mile	\$ 2,000,896				\$ -				\$ -				\$ -				\$ -
3 Single Track Removal	Mile	\$ 130,048				\$ -				-				-				\$ -
4 Major Utility Relocations - Dense Urban 5 Major Utility Relocations - Urban	Mile Mile	\$ 1,548,288 \$ 1,084,416				\$ -				\$ -				\$ -				\$ - ¢ -
6 Major Utility Relocations - Dense Suburban	Mile	\$ 775,168				\$ -				\$ -				\$ -				\$ -
7 Major Utility Relocations - Suburban	Mile	\$ 464,896				\$ -				\$ -				\$ -			:	\$ -
8 Major Utility Relocations - Undeveloped	Mile	\$ 30,720				\$ -				\$ -				\$ -			:	\$ -
ROW (Not Included)																		
ROW required for each segment 1 Dense Urban	Acre	\$ 2,786,321				\$.				\$.				\$.				\$.
2 Urban	Acre	\$ 1,371,510				\$ -				\$ -				\$ -				\$ -
3 Dense Suburban	Acre	\$ 908,134				\$ -				\$ -				\$ -			:	\$ -
4 Suburban	Acre	\$ 208,418				\$ -				\$ -				\$ -			:	-
5 Undeveloped	Acre	\$ 3,642				\$ -				\$ -				-			:	-
ROW required for Temp. Construction Easement 1 Dense Urban	Acre					¢ _				•				•				¢
2 Urban	Acre					\$ -				\$ -				\$ -				\$ -
3 Dense Suburban	Acre					\$ -				\$ -				\$ -			:	\$ -
4 Suburban	Acre					\$ -				\$ -				\$ -			:	\$ -
5 Undeveloped	Acre					\$ -				\$ -				-			:	-
Right-of-Way Required for Stations, Maintenance & Parking Facilities 6 Dense Urban	Acre	\$ 2,786,321				¢				¢				¢				¢
7 Urban		\$ 1,371,510				\$ -				\$ -				\$ -				\$ -
8 Dense Suburban	Acre	\$ 908,134				\$ -				\$ -				\$ -				\$ -
9 Suburban	Acre	\$ 208,418				\$ -				\$ -				\$ -				-
10 Undeveloped	Acre	\$ 3,642				\$ -				\$ -				\$ -				\$ -
Environmental Mitigation = 3% Line Costs						\$ 734,754				\$ 1,263,045				\$ 11,407,670				\$ 4,500,418
System Elements																		
1 Signaling (ATC)	Mile	\$ 2,070,000			1.21	\$ 2,509,091			1.21				1.21				1.21	
2 Communications (w/ Fiber Optic Backbone)	Mile	\$ 540,000			1.21				1.21	\$ 654,545			1.21				1.21	\$ 654,545
3 Wayside Protection System	Mile	\$ 108,000			1.21	\$ 130,909			1.21	\$ 130,909			1.21	\$ 130,909			1.21	\$ 130,909
Electrification Items																		
1 Traction Power supply	Mile	\$ 1,170,000			1.21	\$ 1,418,182			1.21	\$ 1,418,182			1.21	\$ 1,418,182			1.21	\$ 1,418,182
2 Traction Power Distribution		\$ 1,485,000		<u> </u>	1.21	\$ 1,800,000	<u> </u>	<u> </u>	1.21	\$ 1,800,000		<u> </u>	1.21	\$ 1,800,000			1.21	\$ 1,800,000
	Subtotal	· · ·				\$ 31,739,270				\$ 49,877,266				\$ 398,176,072				\$ 161,027,066
Program Implementation Costs (per screening)						\$ 8,093,514				\$ 12,718,703				\$ 101,534,898				\$ 41,061,902
Program Implementation Costs																		
Contingencies (per screening) (25%)						\$ 7,934,818				\$ 12,469,317				\$ 99,544,018			J.	\$ 40,256,766
J				<u> </u>		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	<u> </u>	<u> </u>										
Subtotal			-			\$ 47,767,602		•	•	\$ 75,065,286				\$ 599,254,989				\$ 242,345,734
Subtotal (Rounded)						\$ 48,000,000				\$ 75,000,000				\$ 599,000,000			<u>i_</u>	\$ 242,000,000

 Subtotal (Rounded)
 \$ 75,000,000
 \$ 599,000,000
 \$ 242,000,000

Section Sect		(4 tracks)	At-Grade			(2 tracks)	At-Grade			duct (4 tracks)	Elevated Viad			luct (2 tracks)	Elevated Via		UNIT PRICE	UNIT	
Second Second	0.68 Miles	3	End: 1865 ± 00	Start: 1920 ± 00	ilos	B 0.68 N	End: 1865 ± 00	Start: 1920 ± 00	liloe			Start: 1920 ± 00	Milos			Start: 1920 ± 00			Subsection 6
Column C	J.00 Wiles	0.001	L11u. 1003 + 00	otart. 1027 + 00	lies	0.08 10	L11u. 1005 + 00	Start. 1027 + 00	illes	0.00 10	L11u. 1003 + 00	Start. 1027 + 00	MIIG2	0.001	L110. 1003 + 00	Start. 1027 + 00	(3rd Quarter)		
Age Page P	Cost		End: 0 + 00	Start: 0 + 00	Cost		End: 1965 : 00	Start: 1020 + 00	Cost		End: 0 : 00	Start: 0 + 00	Cost		End: 0 + 00	Start: 0 + 00			
Color Inches Color Col			L110. 0 + 00		-		L11d. 1005 + 00		-		Liid. 0 + 00								
Page Page																			Double Track Tunnel (Mile)
Post of the Control Mines Post of the Control Mines			End: 1965 + 00																
Sear Teach Sear Company Comp			E110. 1000 + 00		-				-		End: 1865 + 00				End: 0 + 00				
	S	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles				0.00 Miles		Start: 0 + 00			Four Track Tunnel (Mile)
	<u>i</u>	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		1 1	
2 2 2 2 2 2 2 2 2 2	0.00 \$	0.00			1.431.971	0.68				0 5			\$ -	0			\$ 2.100.224	Mile	
# Alloues Encoderment in transmost 28 5 4,000 at 0 5 0 0 5 0 0 5 0 0	0.00 \$	0.00			-	0.00			-	0			\$ 3,204,655	0.68			\$ 4,700,160	Mile	2 Double Track Section - On Structure
Post Table Section Field Post		0.00			-				-	0 3			-	0					
For 1 to Section N Deads	0.00 \$	0.00			-	0.00			-	0			\$ -	0			\$ 4,700,160	Mile	4 Double Track Section - In Trench
For Task Section On Souther May 8 9,000,000 0 5 0 0 5 0 0 5 0 0		l l																	Four Track Section - Total
Pear Trispect (System) May 5 5,000,200 0 5 0 0	0.68 \$ 2,863,942	0.68			-	0.00													
Figure 1	0 \$	0			-	0			6,409,309	0.68			\$ -	0.00					
Supplement Action	0 \$	ı			-	0			-	0 3			\$ - \$ -	0					
Script Foot Senior A Closes		1											*	Ŭ			7/100/020		1 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Simple Place Section - Financial Calculation Section - Financial Calculation Section - Financial Calculation Section - Financial Calculation Section - Financial Calculation - Financial Cal					,				,	. ا ـ			Φ.	_[A 1540000		
250/get plate Section In Turwing to Stakey Nov. 2,205/get) 0 5 0 0	0 \$	0			-	0			-	0 3			\$ - \$	0					
Simple Plack Section In Trends Mile \$ 2,000.000 0 5 0 0	0 \$	0			-					ol s			\$ -	ol					
16 Friend's Signiff Teach - 40 Goods	0 \$	0			-	0			-	0 5			\$ -	0					
To Principal Stray Protect - Ad Crapte	0 \$, ا			¢				¢ 2 020 EE2	Mila	0 Fraight Double Track - At Grade
Earthwork flores Apr S 9,216 0 5 0 5 0 5 0 5 1 1 1 1 1 1 1 1 1	0 \$	0			-				, -	0 5			\$ -						
Sister Representer-Underestaged																			
2 Total of	0.00 ¢ 02.70	0.00			40 507	F 27							¢	0			¢ 0.217	Aoro	
Structures Turners Value Section Corp Section Section Corp Section Section Corp Sect	9.09 \$ 83,782	9.09			49,507	5.37			-	0 3			\$ - \$	0					
Signature Sign	0 \$	1 0			-	0			-	0			\$ -	0					
61 and supplier (Control Are 5	0.00 \$	0.00			-	0.00			-	0.00									
Security Feming (Boh sides of ROW)		0.00							-	0.00									
S S S S S S S S S S		0.00 0.68																	
Structures Tunnels Wells Structure (Parisks)	\$ 9,11	0.00				0.00			-	0.00			\$ -	0.00					
Standard Structure (Taroks) Mile \$ 3,477.677 0.68 \$ 2,845,004 0.00 \$		l																	
Standard Structure (tracks)	Alios & SoliM	0.00 Milos				0.00 Milos				0.00			\$ 22.045.004	0.60			¢ 24.072.672	Milo	
2 Pigh Shucture					-								\$ 23,040,004						
A Waterway Crossing - Perimary Mile \$ 83,42,208 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	\$	1			-	0.00 1100			-	5.00			\$ -	0.00					
S Malerway Crossing - Secondary (frigation Canal)	\$	i			-	:			-				\$ -						
6 FWin Single Track DMIRBlast (≤6 Miles)	\$	i			-				-				\$ -						
7 Twin Single Track TBM (<6 Miles) Mile \$ 106,637,312 \$ \$. \$.	\$	i			-				-				\$ - \$						
9 Double Track Mined (Soft Soil)	\$	i			-				-				\$ -				\$ 106,637,312		
10 Double Track TBM (\$61 Soil)	\$	i			-	:			-				\$ -					Mile	8 Twin Single Track TBM w/3rd Tube (<6 Miles)
Double Track TBM v/3rd Tube (>6 Miles)	0 \$	0			-	0			-	0 3			\$ -	0					
Double Track TBM w/3rd Tube (>6 Miles)	\$	i			-				-	;			-						
12 Crossovers		ı l																	
13 Cut & Cover Double Track Tunnel Mile \$	\$	ı l			-	!			-	5			\$ -						
14 Trench Long (2 tracks) (1000 ft+) Mile Trench Long (4 tracks) (1000 ft+) Mile S 86,286,336 0.00 Miles D 0.00	\$				-				-				\$ -	ا					
Trench Long (4 tracks) (1000 ft) Mile \$ 86,286,336 Mile \$ 78,843,904 Mile \$ 78,843,904 \$ 113,265,856 Mile \$ 118,487,004 Mile \$ 118,487,0	viiles \$	0.00 Miles			-	0 00 Miles			-	0 00 Miles			\$ -	0 0 00 Miles					
15 Trench Short (2 tracks) (<1000 ft) Mile \$78,843,904 Mile \$118,265,856 Mile \$118,265,856 Mile \$118,487,004 Mile \$118,487,004 Mile \$118,487,004 Mile \$118,487,004 Mile \$10,000		0.00 Miles			•				-				Ŧ				\$ 86,286,336	Mile	Trench Long (4 tracks) (1000 ft+)
16 Mechanical & Electrical for Tunnels Mile \$ 11,848,704 17 Retaining Walls Mile \$ 8,613,888 18 Containment Walls Mile \$ 5,907,456 19 Single Track Cut and Cover Subway Mile \$ 131,246,080	\$				-				-	Ş			\$ -				\$ 78,843,904	Mile	15 Trench Short (2 tracks) (<1000 ft)
17 Retaining Walls Mile of the standard of the s	0 \$,	, ا			¢	٦				Mile	Irench Short (4 tracks) (<1000 ft) 16 Machanical & Electrical for Tuppels
18 Containment Walls Mile \$ 5,907,456 \$ - 19 Single Track Cut and Cover Subway Mile \$ 131,246,080 \$ -	0 \$	l o			-	0			-	0 3			\$ -	oj n					
19 Single Track Cut and Cover Subway	\$,			-	"							\$ -	ď					
	\$				-				-				\$ -				\$ 131,246,080	Mile	19 Single Track Cut and Cover Subway
	\$				-				-				\$ -				\$ 293,775,360		
Four Track Mined (Soft Soil) Mile \$ 158,400,000 \$ - \$ - \$ - \$ - \$ - \$ Four Track TBM (<6 Miles) \$ 13,274,624 \$ \$ - \$ \$ - \$ \$ \$ \$ \$	\$				-				-	[]			-						
Four Track TBM w/3rd Tube (>6 Miles) Mile \$ 353,441,792																	\$ 353,441,792	Mile	Four Track TBM w/3rd Tube (>6 Miles)
	0.00 \$	0.00			-	0.00			-	0.00			\$ -	0.00					
Grade Separations																			Grade Separations
Grade Separations	\$				<u>-</u>]							\$ -				\$ 13,284,352	ea	
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) ea \$ 19,926,528 \$ - 1 \$ 19,926,528	1 \$ 19,926,528	ı 1			19,926,528	1			-				\$ -				\$ 19,926,528		
2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) ea \$ 2,759,680 \$ - \$ \$ -	\$				-				-				\$ -				\$ 2,759,680	ea	2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)
3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) ea \$ 2,029,568 \$ - \$	\$				-				-				\$ -						
4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	\$				-				-				\$ -						4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)
SRoadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban) ea \$ 3,593,216 \$ - \$ - \$ - \$ - \$ - \$ - \$ \$	\$				-				-				\$ -						
6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped) ea \$ 3,171,328 \$ - \$ \$ -	\$				-				-				\$ -						6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)
7 Street Bridging HSR Trench ea \$ 1,398,784 \$ - \$ -	\$,			-]			-	9			\$ -						7 Street Bridging HSR Trench

COST ELEMENTS	UNIT	UNIT PRICE		Elevated Viad	duct (2 tracks)			Elevated Via	duct (4 tracks)			At-Grade	(2 tracks)		P	At-Grade (4 tracks)	
Subsection 6	·	Base: 2009			В				В				3			В	
		(3rd Quarter)	Start: 1829 + 00	End: 1865 + 00	0.68 Mile	es	Start: 1829 + 00	End: 1865 + 00	0.68	Miles	Start: 1829 + 00	End: 1865 + 00	0.68	Miles	Start: 1829 + 00 End: 18	865 + 00 0.68 N	Miles
		(Srd Qddrtcr)															
Subsection Details			01 1 0 00	F 1 0 00	Quant.	Cost	0	F 1 0 00	Quant.	Cost	0	E 1 10/E 00	Quant.	Cost	0, 10, 00	Quant.	Cost
Double Track At-Grade (Mile) Double Track Elevated (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles 0.68 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 1829 + 00 Start: 0 + 00	End: 1865 + 00	0.68 Miles 0.00 Miles			0 + 00 0.00 Miles 0.00 Miles	
Double Track Elevated (Mile)			Start: 1829 + 00 Start: 0 + 00	End: 1865 + 00	0.68 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles		Start: 0 + 00 Start: 0 + 00	0.00 Miles	
Double Track Turner (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1829 + 00 End: 18		
Four Track Elevated (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1829 + 00	Fnd: 1865 + 00	0.68 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles	
Four Track Tunnel (Mile)			Start: 0 + 00	21101 0 7 00	0.00 Miles		Start: 0 + 00	21101 1000 1 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles	
Four Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles	
8 Minor Crossing Closures	ea	\$ 87,040			\$	-				\$ -				\$ -			\$ -
Building Items																	
1 Intermediate Passenger Stations		\$ -			\$	-				\$ -				\$ -			\$ -
2 Terminal Passenger Stations	Each	\$ -			\$	-				\$ -				\$ -			\$ -
Caltrain Passenger Station - At-Grade	Each	\$15,000,000			\$	-				\$ -				\$ -			\$ -
Caltrain Passenger Station - On Structure	Each	\$15,000,000			\$	-				\$ -				\$ -			\$ -
Caltrain Passenger Station - In Tunnel or Subway	Each	\$15,000,000			\$	-				\$ -				\$ -			\$ -
Caltrain Passenger Station - In Trench	Each Each	\$15,000,000			\$	-				\$ -				5 -			\$ -
3 Maintenance Facility 4 Parking - Structures		\$ 123,921,884			\$	-				\$ -				\$ -			\$ -
	space	\$ -			\$	-				\$ -				\$ -			\$ -
5 Parking - At Grade	space	5 -			•	-				\$ -				•			\$ -
Rail & Utility Relocation																	
1 Single Track Relocation (Temporary)	Mile	\$ 2,000,896			¢					¢				¢			4
2 Single Track Relocation (Temporary)	Mile	\$ 2,000,896			\$	-				•				•			\$ -
3 Single Track Renoval	Mile	\$ 130,048			\$					\$ -				\$ -			\$
4 Major Utility Relocations - Dense Urban	Mile	\$ 1,548,288			\$	_				\$.				\$ -			\$
5 Major Utility Relocations - Urban	Mile	\$ 1,084,416			\$					\$.				\$.			\$
6 Major Utility Relocations - Dense Suburban	Mile	\$ 775,168			\$	_				\$ -				\$ -			\$ -
7 Major Utility Relocations - Suburban	Mile	\$ 464,896			\$	_				\$ -				\$ -			\$ -
8 Major Utility Relocations - Undeveloped	Mile	\$ 30,720			\$	_				\$ -				\$ -			\$ -
- - - - - - - - - -										•				•			,
ROW (Not Included)																	
ROW required for each segment																	
1 Dense Urban	Acre	\$ 2,786,321			\$	-				\$ -				\$ -			\$ -
2 Urban	Acre	\$ 1,371,510			\$	-				\$ -				\$ -			\$ -
3 Dense Suburban	Acre	\$ 908,134			\$	-				\$ -				\$ -			\$ -
4 Suburban	Acre	\$ 208,418			\$	-				\$ -				\$ -			\$ -
5 Undeveloped	Acre	\$ 3,642			\$	-				\$ -				\$ -			\$ -
ROW required for Temp. Construction Easement																	
1 Dense Urban	Acre				\$	-				\$ -				\$ -			\$ -
2 Urban	Acre				\$	-				\$ -				\$ -			\$ -
3 Dense Suburban	Acre				\$	-				\$ -				\$ -			\$ -
4 Suburban	Acre				\$	-				\$ -				\$ -			\$ -
5 Undeveloped	Acre				\$	-				\$ -				\$ -			\$ -
Right-of-Way Required for Stations, Maintenance & Parking Facilities																	
6 Dense Urban	Acre	\$ 2,786,321			\$	-				\$ -				\$ -			\$ -
7 Urban		\$ 1,371,510			\$	-				\$ -				\$ -			\$ -
8 Dense Suburban		\$ 908,134			\$	-				\$ -				\$ -			\$ -
9 Suburban	Acre	\$ 208,418			\$	-				\$ -				\$ -			\$ -
10 Undeveloped	Acre	\$ 3,642			\$	-				\$ -				\$ -			\$ -
Environmental Mitigation = 3% Line Costs					\$	811,490				\$ 1,265,304				\$ 645,415			\$ 689,454
System Flaments																	
System Elements	Mile	\$ 2,070,000			0.68 \$	1,411,364			0.68	\$ 1,411,364			0.68	\$ 1,411,364		0.68	\$ 1,411,364
1 Signaling (ATC) 2 Communications (w/ Fiber Optic Backbone)	Mile	\$ 2,070,000			0.68 \$	368,182			0.68				0.68			0.68	
3 Wayside Protection System		\$ 108,000			0.68 \$	73,636			0.68				0.68			0.68	
3) Wayside Frotection System	Wille	\$ 100,000			0.00 \$	73,030			0.00	\$ 75,030			0.00	\$ 75,030		0.00	\$ 73,030
Electrification Items																	
1 Traction Power supply	Mile	\$ 1,170,000			0.68 \$	797,727			0.68	\$ 797,727			0.68	\$ 797,727		0.68	\$ 797,727
2 Traction Power Supply		\$ 1,170,000			0.68 \$	1,012,500			0.68				0.68			0.68	
2	Subtotal	Ψ 1,TUJ,UUU			0.00 \$ \$	31,524,557			0.00	\$ 47,105,528			0.00	\$ 25,822,672	 	0.00	\$ 27,334,670
Program Implementation Costs (per screening)	Jubioidi				\$	8,038,762				\$ 12,011,910				\$ 6,584,781			\$ 6,970,341
Program Implementation Costs					"	0,000,702				+ 12,011,710				÷ 0,007,701			ψ 0,770,0 1 1
1																	
Contingencies (per screening) (25%)					\$	7,881,139				\$ 11,776,382				\$ 6,455,668			\$ 6,833,667
(F-1 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 -						.,55.,.57								. 5,.55,566			. 2,000,007
Subtotal	1		•		\$	47,444,458				\$ 70,893,820		1		\$ 38,863,121	'	'	\$ 41,138,678
Subtotal (Dounded)					,	47,444,430	l			\$ 70,073,020 \$ 71,000,000				¢ 20,000,121			¢ 41,130,070

 Subtotal (Rounded)
 \$ 71,000,000
 \$ 39,000,000
 \$ 41,000,000

COST ELEMENTS	UNIT			Open Trer	nch (4 tracks)			Covered Tr	ench (4 tracks)			Tunnel	(HST only)	
Subsection 6		Base: 2009	Start: 1829 + 00	End: 1865 + 00	B 0.68	3 Miles	Start: 1829 + 00	End: 1865 + 00	B 0.68	Miles	Start: 1829 + 00	End: 1865 + 00	0.68 Mil	les
		(3rd Quarter)	a.c. 1027 T UU	a. 1000 ± 00			a.t. 1027 T UU	1000 + 00			1027 ± UU	g. 1000 ± 00		
ubsection Details ouble Track At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost	Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost	Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost
ouble Track Elevated (Mile)			Start: 0 + 00	2.10. U ∓ UU	0.00 Miles		Start: 0 + 00	∠rid, U ∓ UU	0.00 Miles		Start: 0 + 00		0.00 Miles	
ouble Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1829 + 00	End: 1865 + 00	0.68 Miles	
ouble Track Trench (Mile) our Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	 	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	
our Track Elevated (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
our Track Tunnel (Mile)			Start: 0 + 00	End. 10/F 00	0.00 Miles		Start: 1829 + 00	End: 1865 + 00	0.68 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
our Track Trench (Mile) Double Track Section - Total			Start: 1829 + 00	End: 1865 + 00	0.68 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
1 Double Track Section - At Grade	Mile	\$ 2,100,224			0.00				0.00				0.00 \$	
2 Double Track Section - On Structure	Mile	\$ 4,700,160			0.00				0.00				0.00 \$	2 107 10
3 Double Track Section - In Tunnel or Subway 4 Double Track Section - In Trench	Mile Mile	\$ 4,700,160 \$ 4,700,160			0.00 0.00				0.00 0.00				0.68 \$ 0.00 \$	3,196,10
	.*****	.,,,,,,,,,			3.00	+			0.00	•			0.00	
Four Track Section - Total	N 4 11 -	¢ 4300.440			0.00	¢			0.00	¢			0.00	
Four-track Section - At Grade Four-Track Section - On Structure	Mile Mile	\$ 4,200,448 \$ 9,400,320			0.00 0.00				0.00 0.00				0.00 \$ 0.00 \$	
Four-Track Section - In Tunnel or Subway	Mile	\$ 9,400,320			0.00	\$ -			0.68	\$ 6,409,309			0.00 \$	
Four-Track Section - In Trench	Mile	\$ 9,400,320			0.68	\$ 6,409,309			0.00	\$ -			0.00 \$	
Single Track - Total														
5 Single Track Section - At Grade	Mile	\$ 1,549,312			0	\$ -			0				0 \$	
6 Single Track Section - On structure	Mile	\$ 2,350,080			0	\$ -			0				0 \$	
7 Single Track Section - In Tunnel or Subway 8 Single Track Section - In Trench	Mile Mile	\$ 2,350,080 \$ 2,350,080			0	\$ - \$ -			0				0 \$	
						-								
9 Freight Double Track - At Grade	Mile	\$ 2,839,552			_	\$ -			0				0 \$	
10 Freight Single Track - At Grade	Mile	\$ 1,549,312			0	\$ -			0	\$ -			0 \$	
Earthwork Items														
1 Site Preparation - Undeveloped	Acre	\$ 9,216			9.09				9.09				0.00 \$	
2 Total Cut 3 Total Fill	CY CY	\$ 6.00 \$ 6.00			220000.00 0.00				586666.67 293333.33				0.00 \$ 0.00 \$	
4 Borrow	CY	\$ 13.00			0.00				0.00				0.00 \$	
5 Spoil	CY	\$ 13.00			220000.00	\$ 2,860,000			293333.33	\$ 3,813,333			0.00 \$	
6 Landscape erosion Control 7 Security Fencing (Both sides of ROW)	Acre Mile	\$ 6,144 \$ 144,384			9.09 0.68				0.00 0.00				0.00 \$ 0.00 \$	
8 Special Drainage Facilities	5% Ear				0.08	\$ 220,904				\$ 458,856			\$	
Structures, Tunnels, Walls 1 Standard Structure (2 tracks)	Mile	\$ 34,972,672			0.00 Miles	\$ -			0.00 Miles	\$ -			0.00 Miles \$	
Standard Structure (4 tracks)	Mile	\$ 52,459,008			0.00 Miles	-			0.00 Miles	-			0.00 Miles	
2 High Structure	Mile	\$ 40,424,448				\$ -				\$ -			\$	
3 Long Span Structure 4 Waterway Crossing - Primary	Mile Mile	\$ 61,919,232 \$ 85,342,208				- \$				\$ - \$			\$	
5 Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$ 92,049,408				\$ -			0.01	\$ 697,344			0.01 \$	697,34
6 Twin Single Track Drill&Blast (<6 Miles)	Mile	\$ 142,731,264				\$ -				\$ -			\$	
7 Twin Single Track TBM (<6 Miles) 8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile Mile	\$ 106,637,312 \$ 176,720,896				\$ - \$ -				\$ - \$ -			\$	
9 Double Track Drill & Blast	Mile	\$ 146,887,680			0	\$ -				\$ -			0.00 \$	
10 Double Track Mined (Soft Soil)	Mile	\$ 79,200,000				\$ -				\$ -			0.00 \$	76
Double Track TBM (<6 Miles) Double Track TBM w/3rd Tube (>6 Miles)	Mile Mile	\$ 106,637,312 \$ 176,720,896											0.68 \$	72,707,25
11 Seismic Chamber (Drill & Blast/Mined)	ea	\$ 126,205,952				\$ -				\$ -			\$	
12 Crossovers	ea	\$ 442,368			= -	\$ -				\$ -			\$	
13 Cut & Cover Double Track Tunnel 14 Trench Long (2 tracks) (1000 ft+)	Mile Mile	\$ 131,246,080 \$ 57,524,224			0.00 0.00				0.00				0.00 \$ 0.00 \$	
Trench Long (4 tracks) (1000 ft+)	Mile	\$ 86,286,336			0.68				0.00	•			0.00 \$	
15 Trench Short (2 tracks) (<1000 ft)	Mile	\$ 78,843,904				\$ -				\$ -			\$	
Trench Short (4 tracks) (<1000 ft) 16 Mechanical & Electrical for Tunnels	Mile Mile	\$ 118,265,856 \$ 11,848,704			0.00	\$ -			0.68	\$ 8,078,662			0.68 \$	8,078,66
17 Retaining Walls	Mile	\$ 8,613,888			0.00				0.00				0.00 \$	0,010,00
18 Containment Walls	Mile	\$ 5,907,456			0.00					\$ -			\$	
19 Single Track Cut and Cover Subway Four Track Drill & Blast	Mile Mile	\$ 131,246,080 \$ 203,775,360				\$ •				\$ -			\$	
Four Track Mined (Soft Soil)	Mile	\$ 293,775,360 \$ 158,400,000				\$ -				\$ -			0.00 \$	
Four Track TBM (<6 Miles)	Mile	\$ 213,274,624											0.00 \$	
Four Track Cut & Cover Tuppel	Mile Mile	\$ 353,441,792			0.00	¢			0.40	¢ 170.071.007			0.00 \$	
Four Track Cut & Cover Tunnel	iville	\$ 262,492,160			0.00	-			0.68	\$ 178,971,927			0.00 \$	
Grade Separations														
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$ 13,284,352				\$ -				\$ -			\$	
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) 2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea ea	\$ 19,926,528 \$ 2,759,680				-				\$ -			\$	
3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Suburban)	ea	\$ 2,759,680				\$ -				\$ -			\$	
4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 3,563,520				\$ -				\$ -			\$	
5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 3,593,216				\$ -				\$ -			\$	
	ea ea	\$ 2,850,816 \$ 3,171,328				φ <u>-</u>				\$ - \$ -			\$	
6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea													

COST ELEMENTS	UNIT	UNIT PRICE		Open Tren	ch (4 tracks)			Covered Tre	ench (4 tracks)			Tunnel ((HST only)	
Subsection 6		Base: 2009			В				В				В	
		(3rd Quarter)	Start: 1829 + 00	End: 1865 + 00	0.68	8 Miles	Start: 1829 + 00	End: 1865 + 00	0.68	Miles	Start: 1829 + 00	End: 1865 + 00	0.68	3 Miles
Subsection Details		1, ,			Quant.	Cost			Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles	0031	Start: 0 + 00	End: 0 + 00	0.00 Miles	COST	Start: 0 + 00	End: 0 + 00	0.00 Miles	0031
Double Track Elevated (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1829 + 00	End: 1865 + 00	0.68 Miles	
Double Track Trench (Mile) Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	
Four Track Elevated (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	-
Four Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 1829 + 00	End: 1865 + 00	0.68 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Trench (Mile)			Start: 1829 + 00	End: 1865 + 00	0.68 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
8 Minor Crossing Closures	ea	\$ 87,040				\$ -				\$ -				\$ -
Building Items 1 Intermediate Passenger Stations 2 Terminal Passenger Stations Caltrain Passenger Station - At-Grade Caltrain Passenger Station - On Structure Caltrain Passenger Station - In Tunnel or Subway Caltrain Passenger Station - In Trench 3 Maintenance Facility	Each Each Each Each Each Each Each	\$15,000,000 \$15,000,000 \$15,000,000 \$15,000,000				\$ - \$ - \$ - \$ - \$ - \$ -				\$ - \$ - \$ - \$ - \$ - \$ -				\$ - \$ - \$ - \$ - \$ - \$ - \$ -
4 Parking - Structures 5 Parking - At Grade	space space	e \$ - e \$ -				\$ - \$ -				\$ - \$ -				\$ - \$ -
Rail & Utility Relocation 1 Single Track Relocation (Temporary) 2 Single Track Relocation (Permanent) 3 Single Track Removal 4 Major Utility Relocations - Dense Urban	Mile Mile Mile Mile	\$ 2,000,896 \$ 2,000,896 \$ 130,048 \$ 1,548,288				\$ - \$ - \$ -				\$ - \$ - \$ -				\$ - \$ - \$ -
5 Major Utility Relocations - Urban 6 Major Utility Relocations - Dense Suburban 7 Major Utility Relocations - Suburban 8 Major Utility Relocations - Undeveloped	Mile Mile Mile Mile	\$ 1,084,416 \$ 775,168 \$ 464,896 \$ 30,720				\$ - \$ - \$ -				\$ - \$ - \$ -				\$ - \$ - \$ - \$ -
ROW (Not Included) ROW required for each segment 1 Dense Urban 2 Urban 3 Dense Suburban 4 Suburban 5 Undeveloped ROW required for Temp. Construction Easement	Acre Acre Acre Acre	\$ 1,371,510 \$ 908,134 \$ 208,418				\$ - \$ - \$ - \$ - \$ -				\$ - \$ - \$ - \$ - \$ -				\$ - \$ - \$ - \$ - \$ -
1 Dense Urban 2 Urban 3 Dense Suburban 4 Suburban 5 Undeveloped Right-of-Way Required for Stations, Maintenance & Parking Facilities	Acre Acre Acre Acre					\$ - \$ - \$ - \$ -				\$ - \$ - \$ - \$ - \$ -				\$ - \$ - \$ - \$ -
6 Dense Urban 7 Urban 8 Dense Suburban 9 Suburban 10 Undeveloped Environmental Mitigation = 3% Line Costs		\$ 1,371,510 \$ 908,134 \$ 208,418				\$ - \$ - \$ - \$ - \$ 2,138,360				\$ - \$ - \$ - \$ - \$ - \$ 6,113,796				\$ - \$ - \$ - \$ - \$ - \$ 2,540,381
System Elements 1 Signaling (ATC) 2 Communications (w/ Fiber Optic Backbone) 3 Wayside Protection System	Mile Mile Mile	\$ 2,070,000 \$ 540,000 \$ 108,000			0.68 0.68	\$ 368,182			0.68 0.68	\$ 368,182			0.68 0.68	\$ 368,182
Electrification Items 1 Traction Power supply 2 Traction Power Distribution	Mile Mile	\$ 1,170,000 \$ 1,485,000			0.68 0.68				0.68 0.68				0.68 0.68	
	total	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			5.00	\$ 77,080,439 \$ 19,655,512			5.00	\$ 213,570,419 \$ 54,460,457			5.00	\$ 90,883,163 \$ 23,175,207
Contingencies (per screening) (25%)						\$ 19,270,110				\$ 53,392,605				\$ 22,720,791
Subtotal (Pounded)						\$ 116,006,061				\$ 321,423,480				\$ 136,779,160

Subtotal (Rounded) \$ 321,000,000 \$ 137,000,000

COST ELEMENTS	UNIT	UNIT PRICE		Elevated Viado	luct (2 tracks)			Elevated Viaduct	(4 tracks)		At-Grade	(2 tracks)			At-Grade	e (4 tracks)	
Subsection 6	- 	Base: 2009	Start: 1865 ± 00	End: 1940 + 00	C 1.42 I	/liles	Start: 1865 + 00	End: 1940 ± 00	1.42 Miles		Start: 1865 + 00 End: 1940 + 00	C 1.42 Miles		Start: 1865 + 00	End: 1940 + 00	C 1.42 N	/liles
		(3rd Quarter)	Start, 1000 ± 00	_ma. 1740 ± 00			Start. 1000 ± 00	2.10. 1740 ± UU			5.c 1000 + 00 Eliu. 1940 + 00			Start. 1000 ± 00	2.14. 1740 ± UU		
Subsection Details Double Track At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost	Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost	Start: 1865 + 00 End: 1940 + 00	Quant. 1.42 Miles	Cost	Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost
Double Track At-Grade (Mile) Double Track Elevated (Mile)			Start: 0 + 00 Start: 1865 + 00	End: 0 + 00 End: 1940 + 00	1.42 Miles	I	Start: 0 + 00 Start: 0 + 00		0.00 Miles	ŀ	Start: 0 + 00 End: 1940 + 00	0.00 Miles	I	Start: 0 + 00 Start: 0 + 00	∟11u. U + UU	0.00 Miles	ı
Double Track Lievaled (Mile)			Start: 0 + 00	, 10 1 00	0.00 Miles	l	Start: 0 + 00		0.00 Miles	ł	Start: 0 + 00	0.00 Miles	Į	Start: 0 + 00		0.00 Miles	•
Double Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00	F. Lo.	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 1865 + 00		1.42 Miles	
Four Track Elevated (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles	l	Start: 0 ± 00		1.42 Miles	ļ	Start: 0 + 00 End: 0 + 00	0.00 Miles	1	Start: 0 + 00	End: 0 + 00	0.00 Miles	•
Four Track Tunnel (Mile) Four Track Trench (Mile)			Start: 0 + 00 Start: 0 + 00	+	0.00 Miles 0.00 Miles	l	Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	}	Start: 0 + 00 Start: 0 + 00	0.00 Miles 0.00 Miles	ļ	Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	•
Double Track Section - Total			Start. 0 ± 00	+	SOU WINGS		Start. U T UU				2.2.0.0100	S.OO WIIIOS		Start. U T UU		5.00 MHG3	·
1 Double Track Section - At Grade	Mile	\$ 2,100,224			0	\$	1		0 \$	-		1.42 \$	2,983,273			0.00	
2 Double Track Section - On Structure	Mile	\$ 4,700,160			1.42	\$ 6,676,364	1		0 \$	-		0.00 \$	- 1			0.00	
3 Double Track Section - In Tunnel or Subway	Mile Mile	\$ 4,700,160 \$ 4,700,160		1	0	· \$ -	1		0 \$	-	·	0.00 \$ 0.00 \$	- 1	ļ		0.00	
4 Double Track Section - In Trench	iville	4,/00,160			ı ⁰	φ -	1		U \$	-		0.00 \$	- 1	ļ		0.00	Ψ
Four Track Section - Total	i			1		•	1				·		ı				•
Four-track Section - At Grade	Mile	\$ 4,200,448			0.00	\$			0.00 \$	-	ı	0.00 \$	- į		ľ	1.42	
Four-Track Section - On Structure	Mile	\$ 9,400,320			0.00	\$			1.42 \$	13,352,727	ı [0.00 \$	- 1	1		0.00	
Four-Track Section - In Tunnel or Subway	Mile	\$ 9,400,320		1	0	\$	1		0 \$	-	·	0 \$	- 1	ļ		0	\$
Four-Track Section - In Trench	Mile	\$ 9,400,320	1	1	0	-	1		0 \$	-	·	0 \$	- 1			0	•
Single Track - Total	i			1		•	1				·		ı				•
5 Single Track Section - At Grade	Mile	\$ 1,549,312		1	o	\$	1		0 \$	-	·	0 \$	- 1	ļ		0	\$
6 Single Track Section - On structure	Mile	\$ 2,350,080		J	ı ől	\$ -			0 \$	-	ı [0 \$	- 1		ļ	ő	\$
7 Single Track Section - In Tunnel or Subway	Mile	\$ 2,350,080		J	0	\$ -			0 \$	-	ı [0 \$	- 1		ļ	0	\$
8 Single Track Section - In Trench	Mile	\$ 2,350,080			0	-			0 \$	-	ı [0 \$	- 1			0	\$
9 Freight Double Track - At Grade	Mile	\$ 2,839,552		į J	ا	\$			0 *	J	· [\dagger \phi	ļ		ľ		\$
9 Freight Double Track - At Grade 10 Freight Single Track - At Grade		\$ 2,839,552 \$ 1,549,312		į J	0	\$			U &	-]	· [0 \$ 0 \$	- . !		ľ	0	\$
		.,,,,,,12			ı				٥	-]	ı [υ φ	- !		ľ	٥	
Earthwork Items					ı l					J	ı		ļ		ľ		
1 Site Preparation - Undeveloped	Acre	\$ 9,216		J	11.19		i l		18.94 \$	174,545	ı [11.19 \$	103,140		ļ	18.94	\$ 174,545
2 Total Cut 3 Total Fill	CY	\$ 6.00			0.00				0.00 \$	-]	ı	0 \$	- i	ļ		0	\$
3 Total Fill 4 Borrow	CY CY	\$ 6.00 \$ 13.00			0.00 0.00				0.00 \$ 0.00 \$	-	ı	0 \$ 0.00 \$	- !	ļ		0 0.00	\$
4 Borrow 5 Spoil	CY	\$ 13.00 \$ 13.00			0.00 0.00				0.00 \$	-]	ı [0.00 \$ 0.00 \$	- !			0.00 0.00	
6 Landscape erosion Control	Acre	\$ 6,144			0.00				0.00 \$	- 1	ı	0.00 \$	- - !		ľ	0.00	\$ -
7 Security Fencing (Both sides of ROW)	Mile	\$ 144,384			0.00	\$ -			0.00 \$	-]	ı [1.42 \$	205,091	1		1.42	\$ 205,091
8 Special Drainage Facilities	5% Eartl				1	\$ 5,157			\$	8,727	ı [\$	15,412		ľ		\$ 18,982
	i				ı l	ı					ı [į		ľ		ı
Structures, Tunnels, Walls 1 Standard Structure (2 tracks)	Mile	\$ 34,972,672		J	1.42	\$ 49,677,091			0.00 \$	ļ	ı [0.00 \$	Í		ļ	0.00	\$
1 Standard Structure (2 tracks) Standard Structure (4 tracks)	Mile Mile	\$ 34,972,672 \$ 52,459,008	1	J	1.42 0.00	47,011,091			0.00 \$ 1.42 \$	74,515,636	ı [0.00 \$ 0.00	- 1		ļ	0.00	
2 High Structure	Mile	\$ 40,424,448		J	0.00	\$		F	1.72 \$	- 10,030	ı [\$	_ (ļ	0.00	\$
3 Long Span Structure	Mile	\$ 61,919,232		J	ı l	\$			\$	-]	ı [\$	- 1		ļ		\$ -
4 Waterway Crossing - Primary	Mile	\$ 85,342,208		1	ı j	\$ -	1		\$	-	·	\$	- I	ļ		ļ	\$
5 Waterway Crossing - Secondary (Irrigation Canal)	Mile Mile	\$ 92,049,408		1	ı j	•	1		\$	-	·	0.01 \$	871,680	ļ		0.01	\$ 871,680 \$
6 Twin Single Track Drill&Blast (<6 Miles) 7 Twin Single Track TBM (<6 Miles)		\$ 142,731,264 \$ 106,637,312		1	ı j	\$	1		\$	-	·	\$	- 1	ļ		ļ	\$
8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$ 176,720,896		1	ı j	\$	1		\$	- 1	·	\$	- - 1	ļ		ļ	\$
9 Double Track Drill & Blast	Mile	\$ 146,887,680		1	0	\$	1		0 \$	-	·	0 \$	- 1	ļ		0	\$
10 Double Track Mined (Soft Soil)	Mile	\$ 79,200,000		1	ı j	\$	1		\$	-	·	\$	- 1	ļ		ļ	\$ -
Double Track TBM (<6 Miles)	Mile Mile	\$ 106,637,312		1	ı j	•	1				·	\$	- 1	ļ		ļ	\$
Double Track TBM w/3rd Tube (>6 Miles) 11 Seismic Chamber (Drill & Blast/Mined)	Mile ea	\$ 176,720,896 \$ 126,205,952		1	ı j	\$	1		¢.		·	\$	- 1	ļ		ļ	\$
12 Crossovers	ea	\$ 126,205,952		1	ı j	\$	1		\$	- 1	·	\$	- 1	ļ		ļ	\$ -
13 Cut & Cover Double Track Tunnel	Mile	\$ 131,246,080		1	0	\$	1		0 \$	-	·	0 \$	- 1	ļ		0	\$
14 Trench Long (2 tracks) (1000 ft+)	Mile Mile Mile Mile	\$ 57,524,224			0.00 Miles	\$			0.00 Miles \$	-	ı	0.00 Miles \$	- (ľ	0.00 Miles	\$
Trench Long (4 tracks) (1000 ft+) 15 Trench Short (2 tracks) (<1000 ft)	Mile	\$ 86,286,336			0.00 Miles	•			0.00 Miles	J	ı	0.00 Miles	ļ		ľ	0.00 Miles	\$
15 Trench Short (2 tracks) (<1000 ft) Trench Short (4 tracks) (<1000 ft)	Mile Mile	\$ 78,843,904 \$ 118,265,856	1		ı l	-			\$	-	ı	\$	- !		ľ		φ -
16 Mechanical & Electrical for Tunnels	Mile	\$ 118,265,856 \$ 11,848,704		į J	ام	\$			0 6	_]	· [م ا و	ļ		ľ	ام	\$
17 Retaining Walls	Mile Mile	\$ 8,613,888			ا ما	\$ -			0 \$	- 1	ı	0 \$	- - !		ľ	n	\$ -
18 Containment Walls	Mile	\$ 5,907,456		į J	ı ĭ	\$			\$	-	· [J \$	- i		ľ		\$
19 Single Track Cut and Cover Subway	Mile	\$ 131,246,080		į J	ı l	\$ -			\$	-	· [\$	- 1		ľ		\$ -
Four Track Drill & Blast Four Track Mined (Soft Soil)	Mile Mile	\$ 293,775,360 \$ 158,400,000			ı l	\$			\$	-	ı	\$	- !		ľ		\$
Four Track Mined (Soft Soil) Four Track TBM (<6 Miles)	Mile Mile	\$ 158,400,000 \$ 213,274,624		į J	ı l	· •			\$	-	· [\$	- !		ľ		\$
Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 353,441,792			! <u> </u>	ı	1					\$	- - 1	ļ		ļ	\$
Four Track Cut & Cover Tunnel		\$ 262,492,160			0.00	\$ -	1		0.00 \$	-		0.00 \$	- 1	ļ		0.00	\$ -
		.,.55			1	ı			- 1	ļ	ı [1				ı
Grade Separations	i	¢ 40.00		1		¢.	1				·		ı				.
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$ 13,284,352 \$ 19,926,528			! <u> </u>	\$ -	1		\$	-		\$	- 1	ļ		ļ	\$ -
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) 2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea ea	\$ 19,926,528 \$ 2,759,680		1	ı j	\$	1		\$	-	·	\$	- 1	ļ		ļ	\$
2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) 3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea ea	\$ 2,759,680 \$ 2,029,568			l l	\$ -	1		\$	- [\$	- _1				\$ -
4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 3,563,520			l l	\$ -	1		\$	-		\$	- - I				\$
5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$ 3,593,216		1	ı j	\$	1		\$	-	·	\$	- 1	ļ		ļ	\$ -
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 2,850,816			l l	\$	1		\$	-		\$	- 1				\$ -
de l'a l'anne de		0 474 000	•		. i			ı	1 .		, i	I			li i		
6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped) 7 Street Bridging HSR Trench	ea ea	\$ 3,171,328 \$ 1,398,784			1	\$ -			\$	-	,	\$	- '		ļ		\$ -

COST ELEMENTS	UNIT	UNIT PRICE		Elevated Via	duct (2 tracks)			Elevated Via	duct (4 tracks)			At-Grad	e (2 tracks)		At-Grade	e (4 tracks)	
Subsection 6		Base: 2009			С				C			1	С			С	
		(3rd Quarter)	Start: 1865 + 00	End: 1940 + 00	1.42 N	liles	Start: 1865 + 00	End: 1940 + 00	1.42	Miles	Start: 1865 + 00	End: 1940 + 00	1.42	Miles	Start: 1865 + 00 End: 1940 + 00	1.42 N	<u>liles</u>
Subsection Details					Quant.	Cost			Quant.	Cost			Quant.	Cost		Quant.	Cost
Double Track At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1865 + 00	End: 1940 + 00	1.42 Miles		Start: 0 + 00 End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)			Start: 1865 + 00	End: 1940 + 00	1.42 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles	
Double Track Tunnel (Mile) Double Track Trench (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	0.00 Miles 0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1865 + 00 End: 1940 + 00	1.42 Miles	
Four Track Elevated (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1865 + 00	End: 1940 + 00	1.42 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00 End: 0 + 00	0.00 Miles	
Four Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles	
Four Track Trench (Mile)	T	L¢ 07.040	Start: 0 + 00		0.00 Miles	Φ.	Start: 0 + 00		0.00 Miles	*	Start: 0 + 00		0.00 Miles	•	Start: 0 + 00	0.00 Miles	.
8 Minor Crossing Closures	ea	\$ 87,040				-				5 -				\$			\$ -
Building Items																	
1 Intermediate Passenger Stations	Each	\$ -				\$ -				\$ -				\$			\$ -
2 Terminal Passenger Stations	Each	\$ -				\$ -				\$ -				\$		ار	\$ -
Caltrain Passenger Station - At-Grade Caltrain Passenger Station - On Structure	Each Each	\$15,000,000 \$15,000,000			1	\$ 15,000,000			1	\$ 15,000,000			0	\$	•	1	\$ 15,000,000
Caltrain Passenger Station - In Tunnel or Subway	Each	\$15,000,000			'	\$ 15,000,000			· '	\$ 15,000,000				\$			\$ -
1 Caltrain Passenger Station - In Trench	Each	\$15,000,000				\$ -				\$ -				\$			\$ -
3 Maintenance Facility	Each	\$ 123,921,884				\$ -				\$ -				\$			\$ -
4 Parking - Structures	space	\$ -				-				-				\$			-
5 Parking - At Grade	space	\$ -				\$ -				\$ -				\$	-		-
Rail & Utility Relocation																	
1 Single Track Relocation (Temporary)	Mile	\$ 2,000,896				\$ -				\$ -				\$			\$ -
2 Single Track Relocation (Permanent)	Mile	\$ 2,000,896				\$ -				\$ -				\$			\$ -
3 Single Track Removal	Mile	\$ 130,048				\$ -				\$ -				\$			\$ -
4 Major Utility Relocations - Dense Urban 5 Major Utility Relocations - Urban	Mile	\$ 1,548,288				\$ -				\$ -				\$	•		\$ -
6 Major Utility Relocations - Orban 6 Major Utility Relocations - Dense Suburban	Mile Mile	\$ 1,084,416 \$ 775,168				\$ - ¢ -				\$ -				•			\$ - \$
7 Major Utility Relocations - Suburban	Mile	\$ 464,896				\$ -				\$ -				\$			\$ -
8 Major Utility Relocations - Undeveloped	Mile	\$ 30,720				\$ -				\$ -				\$			\$ -
ROW (Not Included)																	
ROW required for each segment 1 Dense Urban	Acre	\$ 2,786,321				¢				¢ .				•			¢
2 Urban	Acre	\$ 1,371,510				\$ -				\$ -				\$			\$ -
3 Dense Suburban	Acre	\$ 908,134				\$ -				\$ -				\$			\$ -
4 Suburban	Acre	\$ 208,418				\$ -				\$ -				\$			\$ -
5 Undeveloped	Acre	\$ 3,642				-				-				\$			\$ -
ROW required for Temp. Construction Easement 1 Dense Urban	Acre					¢				¢				¢			¢
2 Urban	Acre					\$ - \$ -				\$ -				\$			\$ - \$ -
3 Dense Suburban	Acre					\$ -				\$ -				\$			\$ -
4 Suburban	Acre					\$ -				\$ -				\$			\$ -
5 Undeveloped	Acre					-				\$ -				\$			-
Right-of-Way Required for Stations, Maintenance & Parking Facilities	Aoro	e 270/221				¢				¢				¢			6
6 Dense Urban 7 Urban	Acre Acre	\$ 2,786,321 \$ 1,371,510				\$ -				\$				\$			\$
8 Dense Suburban		\$ 908,134				\$ -				\$ -				\$			\$ -
9 Suburban	Acre	\$ 208,418				\$ -				\$ -				\$			\$ -
10 Undeveloped	Acre	\$ 3,642				\$ -				\$ -				\$			\$ -
Environmental Mitigation = 3% Line Costs						\$ 2,143,853				\$ 3,091,549				\$ 125,358	'		\$ 667,105
System Elements																	
1 Signaling (ATC)	Mile	\$ 2,070,000			1.42	\$ 2,940,341			1.42	\$ 2,940,341			1.42	\$ 2,940,341		1.42	\$ 2,940,341
2 Communications (w/ Fiber Optic Backbone)	Mile	\$ 540,000			1.42				1.42				1.42			1.42	
3 Wayside Protection System	Mile	\$ 108,000			1.42	\$ 153,409			1.42	\$ 153,409	1		1.42	\$ 153,409		1.42	\$ 153,409
Electrification Items																	
1 Traction Power supply	Mile	\$ 1,170,000			1.42	\$ 1,661,932			1.42	\$ 1,661,932			1.42	\$ 1,661,932		1.42	\$ 1,661,932
2 Traction Power Distribution	Mile	\$ 1,485,000			1.42	\$ 2,109,375			1.42	\$ 2,109,375			1.42	\$ 2,109,375	i	1.42	\$ 2,109,375
	ubtotal				I	\$ 81,237,707 \$ 20,715,715				\$ 113,775,288				\$ 11,936,056		<u> </u>	\$ 30,536,051
Program Implementation Costs (per screening) Program Implementation Costs						\$ 20,715,615				\$ 29,012,698				\$ 3,043,694			\$ 7,786,693
i rogram impiementation costs																	
Contingencies (per screening) (25%)						\$ 20,309,427				\$ 28,443,822				\$ 2,984,014			\$ 7,634,013
3, 7																	
Subtotal						\$ 122,262,749				\$ 171,231,808				\$ 17,963,764			\$ 45,956,757
Subtotal (Pounded)						\$122 000 000				\$171,000,000				\$ 18,000,000			\$ 46,000,000

 Subtotal (Rounded)
 \$171,000,000
 \$ 18,000,000
 \$ 46,000,000

COST ELEMENTS Wheetign 6	UNIT		<u> </u>	Open Tren	nch (4 tracks)		ļ	Covere	ed Trench		ļ	Tunnel ((HST only)	
ubsection 6		Base: 2009 (3rd Quarter)	Start: 1865 + 00	End: 1940 + 00	C 1.42	Miles	Start: 1865 + 00	End: 1940 + 00	C 1.42 N	Villes	Start: 1865 + 00	End: 1940 + 00	C 1.42 l	Miles
ubsection Details		, u vaanter)		1									Quant.	Cost
ouble Track At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost	Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost	Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	CUSI
ouble Track Elevated (Mile)		İ	Start: 0 + 00		0.00 Miles	' 1	Start: 0 + 00		0.00 Miles	Ţ	Start: 0 + 00	End: 0 + 00	0.00 Miles	
puble Track Tunnel (Mile)		İ	Start: 0 + 00		0.00 Miles	' 1	Start: 0 + 00		0.00 Miles	Ţ	Start: 1865 + 00	End: 1940 + 00	1.42 Miles	
ouble Track Trench (Mile)			Start: 0 + 00		0.00 Miles	'	Start: 0 + 00	<u> </u>	0.00 Miles		Start: 0 + 00		0.00 Miles	
our Track Construction/Reconstruction At-Grade (Mile) our Track Elevated (Mile)		ŀ	Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	' F	Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	,	Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	
our Track Elevated (Mile) our Track Tunnel (Mile)		l	Start: 0 + 00 Start: 0 + 00	End: 0 + 00 End: 0 + 00	0.00 Miles 0.00 Miles	' 1	Start: 0 + 00 Start: 1865 + 00	End: 0 + 00 End: 1940 + 00	0.00 Miles 1.42 Miles	,	Start: 0 + 00 Start: 0 + 00	End: 0 + 00 End: 0 + 00	0.00 Miles 0.00 Miles	
our Track Trench (Mile)	_	1	Start: 0 + 00 Start: 1865 + 00	End: 0 + 00 End: 1940 + 00	1.42 Miles	' <u> </u>	Start: 1865 + 00 Start: 0 + 00	End: 1940 + 00 End: 0 + 00	0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00 End: 0 + 00	0.00 Miles	
Double Track Section - Total	1	1	.550 1 00	5 1 00		'	,, 0 1 00							
1 Double Track Section - At Grade	Mile	\$ 2,100,224	1	,	0.00		1		0.00 \$		1		0.00	
2 Double Track Section - On Structure	Mile	\$ 4,700,160	1	,	0.00	\$ -	1		0.00 \$	\$ -	1		0.00	\$
3 Double Track Section - In Tunnel or Subway		\$ 4,700,160 \$ 4,700,160	1	·	0.00		1	1	0.00 \$		1		1.42	
4 Double Track Section - In Trench	Mile	\$ 4,700,160	1	·	0.00	· • -	1	1	0.00 \$	· -	1		0.00	ψ
Four Track Section - Total] 1	1	,	·	' i	1		ı l	,	1			
Four-track Section - 10tal Four-track Section - At Grade	Mile	\$ 4,200,448	1	·	0.00	*	1	1	0.00 \$	\$	1	1	0.00	\$
Four-Track Section - On Structure	Mile	\$ 9,400,320	1	·	0.00	\$ -	1	1	0.00 \$	\$ -	1	1	0.00	\$
Four-Track Section - In Tunnel or Subway	Mile	\$ 9,400,320	1	·	0.00	\$ -	1	1	1.42 \$	\$ 13,352,727	1	1	0.00	\$
Four-Track Section - In Trench	Mile	\$ 9,400,320	1	,	1.42		1		0.00 \$		1		0.00	
Single Treely Tea-1		1	1	·	,	' 1	1		(Ţ	1			
Single Track Section At Grade	N ACT	¢ 1540-	1	·	·	' e	1	1	i [,	1	1		t
5 Single Track Section - At Grade 6 Single Track Section - On structure		\$ 1,549,312 \$ 2,350,080	į l	·	0	- 1 \$	1 1	1	0 \$		1	1	0 .	\$
6 Single Track Section - On structure 7 Single Track Section - In Tunnel or Subway	Mile Mile	\$ 2,350,080 \$ 2,350,080	į l	·	. 0	- 1 \$	1 1	1	0 \$		1	1	0 5	\$
7 Single Track Section - In Tunnel or Subway 8 Single Track Section - In Trench	Mile Mile	\$ 2,350,080 \$ 2,350,080		·	0	`\$	1	1	0 \$		1		0	\$
gaux coulon in monoil	wille	- 2,300,080	1	,	ا	' ⁻ 1	1		ı olu	-	1		U	•
9 Freight Double Track - At Grade	Mile	\$ 2,839,552		·	0	7	1	1	0 \$		1		U .	\$
Freight Single Track - At Grade		\$ 1,549,312		·	0	7	1	1	0 \$		i	1	0	\$
		1	1	·	1	' l	1	1	1	,	1			
Earthwork Items			1	·	·	' t	1	1	i [1	1		•
1 Site Preparation - Undeveloped	Acre	\$ 9,216		·	18.94		1	1	18.94 \$			1	0.00	3
2 Total Cut 3 Total Fill	CY	\$ 6.00 \$ 6.00		·	458333.33		1	1	1222222.22 \$			1	0.00	\$ \$
3 Total Fill 4 Borrow		\$ 6.00 \$ 13.00		·	0.00		1	1	611111.11 \$		1	1	0.00	
4 Borrow 5 Spoil	CY CY	\$ 13.00 \$ 13.00		·	0.00 458333.33		1	1	0.00 \$		1	1	0.00	\$
5 Spoil 6 Landscape erosion Control	CY Acre	\$ 13.00 \$ 6,144	į l	·	458333.33 18.94		1 1	1	611111.11 \$		1	1	0.00	\$
7 Security Fencing (Both sides of ROW)	Mile	\$ 144,384	į l	·	18.94		1 1	1	0.00 \$		1	1	0.00	\$
8 Special Drainage Facilities	5% Eart	thwork	1	·	1.42	\$ 205,091 \$ 460,217	1		I .	\$ 955,949	1		0.00	\$ -
	, _cn	1	1	·	,	.50,217	1		(.00,747	1			
Structures, Tunnels, Walls	J .	1	1	·	,	' <u> </u>	1		(1			
1 Standard Structure (2 tracks)	Mile	\$ 34,972,672	1	·	0.00 Miles	· \$ - j	1	1	0.00 Miles \$	\$ -	1			\$ -
Standard Structure (4 tracks)	Mile	\$ 52,459,008	1	·	0.00 Miles	' ¢	1	1	0.00 Miles	,	1		0.00 Miles	*
2 High Structure	Mile Mile	\$ 40,424,448 \$ 61,919,232	1	·	'	' ⊅ - ¢	1	1	ı [s	• -	1	1	;	• - t
3 Long Span Structure 4 Waterway Crossing - Primary	Mile Mile	\$ 61,919,232 \$ 85,342,208	1	·	'	· * - 1	1	1	t	÷ -	1	1		\$
4 Waterway Crossing - Primary 5 Waterway Crossing - Secondary (Irrigation Canal)	Mile Mile	\$ 85,342,208 \$ 92,049,408	1	·	'	' \$	1	1	0.01 \$	\$ 697,344	1	1	0.01	\$ 697,344
6 Twin Single Track Drill&Blast (<6 Miles)		\$ 92,049,408 \$ 142,731,264		·	'	' \$	1	1	U.UI	. U71,344 \$	1	1	U.UI	\$
7 Twin Single Track TBM (<6 Miles)	Mile	\$ 142,731,264 \$ 106,637,312	1	·	'	'\$ _1	1	1		\$	1	1	,	\$
8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$ 176,720,896		·	,	\$ -	1	1		\$ -	i	1		\$ -
9 Double Track Drill & Blast	Mile	\$ 146,887,680		·	0	' \$ - I	1	1	0 \$	\$ -	i	1	0.00	\$ -
Double Track Mined (Soft Soil)	Mile	\$ 79,200,000		·	· 1	'\$ -1	1	1		\$ -	i	1		\$ -
Double Track TBM (<6 Miles)	Mile	\$ 106,637,312	1	·	·	' l	1	1	i [!	1	1	1.42 Miles	\$ 151,473,455
Double Track TBM w/3rd Tube (>6 Miles)		\$ 176,720,896 \$ 126,205,052	I I	·	·	' e	1	1	i [,	1	1		t
1 Seismic Chamber (Drill & Blast/Mined) 2 Crossovers	ea ea	\$ 126,205,952 \$ 442,368		·	·	· * - 1	1	1	(<u> </u>	÷ -	1	1		\$
2 Crossovers 3 Cut & Cover Double Track Tunnel	ea Mile	\$ 442,368 \$ 131,246,080		·	0.00	`\$	1	1	0 8	÷ ;	1	1	0.00	\$
4 Trench Long (2 tracks) (1000 ft+)	Mile	\$ 131,246,080 \$ 57,524,224	1	·	0.00		1	1	0.00		1	1	0.00	
Trench Long (4 tracks) (1000 ft+)	Mile	\$ 86,286,336	1	·	1.42		1 1	1	0.00	- '	1		0.00	
Trench Short (2 tracks) (<1000 ft)	Mile	\$ 78,843,904	1	·	1,72	'\$ - I	1	1		\$ -	1		3.00	\$ -
Trench Short (4 tracks) (<1000 ft)	Mile	\$ 118,265,856	1	,	·	' <u>'</u>	1		ı l		1			
Mechanical & Electrical for Tunnels	Mile	\$ 11,848,704	1	·	0.00		1	1	1.42 \$		1		1.42	\$ 16,830,545
Retaining Walls		\$ 8,613,888 \$ 5,007,456		·	0.00		1 1	1	0.00 \$	> -	1		0.00	> -
Containment Walls		\$ 5,907,456 \$ 131,246,080		·	0.00	¢ -	1 1	1	ı s	• -	1		;	• - t
Single Track Cut and Cover Subway Four Track Drill & Blast	Mile Mile	\$ 131,246,080 \$ 293,775,360		·	,	- j	1	1	ı (S	• - \$	1			\$
Four Track Drill & Blast Four Track Mined (Soft Soil)	Mile Mile	\$ 293,775,360 \$ 158,400,000		·	'	· * - 1	1	1	ı	÷ - '	1	1	0.00	\$
Four Track Mined (Soft Soil) Four Track TBM (<6 Miles)	Mile Mile	\$ 158,400,000 \$ 213,274,624	1	·	,	' ⁻ 1	1	1	ı li		1		0.00	\$
Four Track TBM (<6 Miles) Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 213,274,624 \$ 353,441,792	1	·	,	' l	1	1	ı L	,	1		U.UU	\$
The second representation of the second seco	Mile	\$ 353,441,792 \$ 262,492,160		·	0.00	' \$1	1		1.42 \$	\$ 372,858,182	1		0.00	\$ -
Four Track Cut & Cover Tunnel	0	, . , 2, 100	1	·	5.00	' - 1	1		1.72	,550, 102	1		0.00	
Four Track Cut & Cover Tunnel	1	1 1	1	·	,	' 1	1		(Ţ	1			
Four Track Cut & Cover Tunnel Grade Separations		1		. 1	,	'\$ -1	t j	1	1 2	\$ -,	i	1	1:	\$ -
Four Track Cut & Cover Tunnel Grade Separations Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$ 13,284,352					. 1	. 1			1	1		
Four Track Cut & Cover Tunnel Grade Separations Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$ 19,926,528			ļ	\$ -!	1 '	1	1 12	p -	'	1	['	b
Four Track Cut & Cover Tunnel Grade Separations Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea ea	\$ 19,926,528 \$ 2,759,680			,	\$ - \$ -		1		\$ - '	'			\$
Four Track Cut & Cover Tunnel Grade Separations Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea ea ea	\$ 19,926,528 \$ 2,759,680 \$ 2,029,568				\$ - \$ - \$ -				\$ - \$ -			,	\$ \$
Four Track Cut & Cover Tunnel Grade Separations Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea ea ea	\$ 19,926,528 \$ 2,759,680 \$ 2,029,568 \$ 3,563,520				\$ - \$ - \$ -			1	\$ - \$ - \$ -				\$ - \$. \$
Four Track Cut & Cover Tunnel Grade Separations Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea ea ea ea	\$ 19,926,528 \$ 2,759,680 \$ 2,029,568 \$ 3,563,520 \$ 3,593,216				\$ - \$ - \$ - \$ -				- - - - - - - - - -			9	\$ \$ \$ \$
Four Track Cut & Cover Tunnel Grade Separations Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea ea ea ea ea	\$ 19,926,528 \$ 2,759,680 \$ 2,029,568 \$ 3,563,520				\$ - \$ - \$ - \$ -			3 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	; - ; - ; - ; - ; -				\$ - \$ - \$ - \$ - \$ -

COST ELEMENTS	UN	IT UNIT PRICE		Open Trer	nch (4 tracks)			Cover	ed Trench			Tunnel	(HST only)	
Subsection 6		Base: 2009		<u> </u>	С				С				C	
		(3rd Quarter)	Start: 1865 + 00	End: 1940 + 00	1.42	2 Miles	Start: 1865 + 00	End: 1940 + 00	1.42	Miles	Start: 1865 + 00	End: 1940 + 00	1.42	2 Miles
Subsection Details					Quant.	Cost			Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles	COST	Start: 0 + 00	End: 0 + 00	0.00 Miles	COST	Start: 0 + 00	End: 0 + 00	0.00 Miles	COST
Double Track Elevated (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1865 + 00	End: 1940 + 00	1.42 Miles	
Double Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile) Four Track Elevated (Mile)			Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	
Four Track Tunnel (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1865 + 00	End: 1940 + 00	1.42 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Trench (Mile)			Start: 1865 + 00	End: 1940 + 00	1.42 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
8 Minor Crossing Closures	ea	\$ 87,040				\$ -				\$ -				\$ -
Building Items Intermediate Passenger Stations Terminal Passenger Stations Caltrain Passenger Station - At-Grade Caltrain Passenger Station - On Structure Caltrain Passenger Station - In Tunnel or Subway Caltrain Passenger Station - In Trench Maintenance Facility Parking - Structures Parking - At Grade	Ea Ea Ea Ea Ea Ea Ea Spa	ch \$ - ch \$15,000,000 ch \$15,000,000 ch \$15,000,000 ch \$15,000,000 ch \$123,921,884			1	\$ - \$ - \$ - \$ - \$ 15,000,000 \$ - \$ -			1	\$ - \$ - \$ - \$ - \$ 15,000,000 \$ - \$ -			0	\$ - \$ - \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ \$ - \$ \$ \$ - \$ \$ \$ - \$ \$ \$ - \$ \$ \$ \$ - \$ \$ \$ \$ - \$ \$ \$ \$ \$ - \$ \$ \$ \$ \$ \$ - \$
Rail & Utility Relocation 1 Single Track Relocation (Temporary) 2 Single Track Relocation (Permanent) 3 Single Track Removal 4 Major Utility Relocations - Dense Urban 5 Major Utility Relocations - Urban 6 Major Utility Relocations - Dense Suburban 7 Major Utility Relocations - Suburban 8 Major Utility Relocations - Undeveloped	Mile Mile Mile Mile Mile Mile	2,000,896 3 130,048 4 1,548,288 5 1,084,416 6 \$ 775,168 6 \$ 464,896				\$ - S - S - S - S - S - S - S - S - S -				\$				\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
ROW (Not Included) ROW required for each segment 1 Dense Urban 2 Urban 3 Dense Suburban 4 Suburban 5 Undeveloped ROW required for Temp. Construction Easement 1 Dense Urban	Acr Acr Acr Acr	e \$ 1,371,510 e \$ 908,134 e \$ 208,418 e \$ 3,642				\$ - \$ - \$ - \$ - \$ -				\$ - \$ - \$ - \$ - \$ -				\$ - \$ - \$ - \$ - \$ -
2 Urban 3 Dense Suburban 4 Suburban 5 Undeveloped Right-of-Way Required for Stations, Maintenance & Parking Facilities 6 Dense Urban 7 Urban 8 Dense Suburban 9 Suburban 10 Undeveloped Environmental Mitigation = 3% Line Costs	Acr Acr Acr Acr Acr Acr	e e e e = 2,786,321 e \$ 1,371,510 e \$ 908,134 e \$ 208,418				\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -				\$ - \$ - \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ 5 - \$ \$ - \$ \$ 5 - \$ \$ 5 - \$ \$ 5 - \$ \$ 5 - \$ \$ 5 - \$ \$ 5 - \$ \$ 5 - \$ \$ 5 - \$ \$ 5 - \$ \$ 5 - \$ \$ 5 - \$ \$ 5 - \$ \$ 5 - \$ \$ 5 - \$ \$ 5 - \$ \$ 5 - \$ \$ 5 - \$ \$ 5 - \$ \$ 5 - \$ \$ \$ 5 - \$ \$ \$ 5 - \$ \$ \$ 5 - \$ \$ \$ 5 - \$ \$ \$ 5 - \$ \$ \$ 5 - \$ \$ \$ 5 - \$ \$ \$ 5 - \$ \$ \$ 5 - \$ \$ \$ 5 - \$ \$ \$ 5 - \$ \$ \$ \$				\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
System Elements 1 Signaling (ATC) 2 Communications (w/ Fiber Optic Backbone) 3 Wayside Protection System	Mile Mile Mile	\$ 540,000			1.42 1.42 1.42	\$ 767,045			1.42 1.42 1.42	\$ 767,045			1.42 1.42 1.42	\$ 767,045
Electrification Items 1 Traction Power supply 2 Traction Power Distribution	Mile Mile Subtotal				1.42 1.42	\$ 2,109,375			1.42 1.42				1.42 1.42	\$ 2,109,375
Program Implementation Costs (per screening) Program Implementation Costs	Subioidi					\$ 174,473,438 \$ 44,490,727				\$ 117,568,005				\$ 188,580,141 \$ 48,087,936
Contingencies (per screening) (25%)						\$ 43,618,360				\$ 115,262,750				\$ 47,145,035
Subtotal (Pounded)						\$ 262,582,524				\$ 693,881,755				\$ 283,813,112

Subtotal (Rounded) \$ 263,000,000 \$ 284,000,000

COST ELEMENTS	UNIT	UNIT PRICE		Elevated Viad	luct (2 tracks)			Elevated Viadu	uct (4 tracks)			At-Grade	e (2 tracks)			At-Grade	(4 tracks)	
Subsection 6		Base: 2009 (3rd Quarter)						n		_	<u> </u>		D			Г	_ 	
		(or a Quarter)	Start: 1940 + 00	End: 1970 + 00		Miles	Start: 1940 + 00	End: 1970 + 00	0.57 Mil	les	Start: 1940 + 00	End: 1970 + 00	0.57 Mil	iles	Start: 1940 + 00	End: 1970 + 00	0.57 M	liles
Subsection Details			<u> </u>	<u> </u>	Quant.	Cost	-	 	Quant.	Cost	-	+	Quant.	Cost	 		Quant.	Cost
Double Track At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles	· · · · · · · · · · · · · · · · · · ·	Start: 0 + 00	End: 0 + 00	0.00 Miles			End: 1970 + 00	0.57 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile) Double Track Tunnel (Mile)		1	Start: 1940 + 00 Start: 0 + 00	End: 1970 + 00	0.57 Miles 0.00 Miles	1	Start: 0 + 00 Start: 0 + 00	<u> </u>	0.00 Miles 0.00 Miles	İ	Start: 0 + 00 Start: 0 + 00	 	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	igsquare	0.00 Miles 0.00 Miles	
Double Track Tunnel (Mile) Double Track Trench (Mile)	_		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	1 i	Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	1	Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00		0.00 Miles	ri	Start: 0 + 00	E. Lace	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1940 + 00	End: 1970 + 00	0.57 Miles	_
Four Track Elevated (Mile) Four Track Tunnel (Mile)		1	Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	1	Start: 1940 + 00 Start: 0 + 00	End: 1970 + 00	0.57 Miles 0.00 Miles	İ	Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	
Four Track Trench (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles	1 i	Start: 0 + 00 Start: 0 + 00		0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Section - Total	Mile	\$ 2,100,224	ı — ,										0.53	1,193,309			0.00	_
1 Double Track Section - At Grade 2 Double Track Section - On Structure	Mile Mile	\$ 4,700,160	۱ ,		0 0.57	\$ - \$ 2,670,545			0 \$		Į.	1	0.57 \$ 0.00 \$	-			0.00 \$ 0.00 \$	-
3 Double Track Section - In Tunnel or Subway	Mile	\$ 4,700,160	۱ ,	۱	0	\$ -			0 \$	· -			0.00 \$	-	1		0.00 \$	-
4 Double Track Section - In Trench	Mile	\$ 4,700,160	۱ ,	!	0	' \$ - I	1		0 \$	· - I	l	1	0.00 \$	-	1		0.00 \$	-
Four Track Section - Total			۱ ,	!		,	1			İ	l	1			1			
Four-track Section - At Grade	Mile Mile	\$ 4,200,448	۱ ,		0.00				0.00 \$ 0.57 \$		Į.	1	0.00 \$				0.57	2,386,618
Four-Track Section - On Structure Four-Track Section - In Tunnel or Subway	Mile Mile	\$ 9,400,320 \$ 9,400,320	۱ ,	l j	0.00	\$ -1	1		0.5/ \$ 0.5/ \$	5 5,341,091			0 \$	-	1		0 8	
Four-Track Section - In Trench	Mile	\$ 9,400,320	۱ ,		0	\$ -			0 \$	-	Į.	1	0 \$	-			0 \$	-
			! !	!		, I	1			İ	l	1			1			
Single Track - Total 5 Single Track Section - At Grade	Mile	\$ 1,549,312	۱ ,	!	0	, \$ - i	1		0 \$	- i	l	1	0 \$: -	1		0 \$	-
6 Single Track Section - On structure	Mile	\$ 2,350,080	۱ ,	l j	l o	\$ -	1		0 \$	· - I			0 \$	-	1		0 \$	-
7 Single Track Section - In Tunnel or Subway 8 Single Track Section - In Trench	Mile Mile	\$ 2,350,080 \$ 2,350,080	۱ ,	l j	0	'\$ - \$ '	1		0 \$	· - 1			0 \$	-	1		0 \$	5 - \$
			! !	!	١	. * - i	1		0 \$		l	1	U \$		1		0 3	-
9 Freight Double Track - At Grade	Mile Mile	\$ 2,839,552	! !	!	0	`\$ - •	1		0 \$	- <u> </u>	l	1	0 \$	-	1		0 \$	-
10 Freight Single Track - At Grade	iviile	\$ 1,549,312	١ ,	۱	0	- ا			0 \$, <u> </u>			0 \$	-	1		0 \$	p -
Earthwork Items	1		۱ ,	l j		, 1	1			İ					1			
1 Site Preparation - Undeveloped	Acre	\$ 9,216	۱ ,	l j	4.48		1		7.58 \$				0.00 \$	-	1		0.00 \$	
2 Total Cut 3 Total Fill	CY	\$ 6.00 \$ 6.00	۱ ,	!	0.00 0.00	ιφ - \$ _1	ļ		0.00 \$ 0.00 \$	-	Į.	1	0.00 \$ 0.00 \$	-	1		0.00 \$ 0.00 \$	-
4 Borrow	CY	\$ 13.00	۱ ,	!	0.00	\$ -	ļ		0.00 \$	-	Į.	1	0.00 \$	-	1		0.00 \$	-
5 Spoil	CY	\$ 13.00 \$ 6.144	۱ ,	!	0.00	\$ -	ļ		0.00 \$	-	Į.	1	0.00 \$	-	1		0.00 \$	-
6 Landscape erosion Control 7 Security Fencing (Both sides of ROW)	Acre Mile	\$ 6,144 \$ 144,384	۱ ,	۱	0.00 0.00				0.00 \$ 0.00 \$				0.00 \$ 0.57 \$		1		0.00 \$ 0.57 \$	
8 Special Drainage Facilities	5% Eart		! !	!	0.00	\$ 2,063	1		\$	3,491	l	1	\$	4,102			5.57	4,102
Structures, Tunnels, Walls			۱ ,	!		, I	1			İ	l	1			1			
1 Standard Structure (2 tracks)	Mile	\$ 34,972,672	۱ ,	l j	0.57	\$ 19,870,836	1		0.00 \$	1			0.00 \$	-	1		0.00 \$	-
Standard Structure (4 tracks)	Mile	\$ 52,459,008	۱ ,	!	0.00	, , , , , , , , , , , , , , , , , , , ,	ļ	ı 📙	0.57 \$		1	1	0.00		1		0.00	
2 High Structure 3 Long Span Structure	Mile Mile	\$ 40,424,448 \$ 61,919,232	۱ ,	۱		'\$ - \$ 1			\$	' - <u>-</u>			\$	-	1		\$	- \$
3 Long Span Structure 4 Waterway Crossing - Primary	Mile	\$ 61,919,232 \$ 85,342,208	۱ ,	!		- \$ - I	ļ		\$		Į.	1	\$	- :	1		3	-
5 Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$ 92,049,408	۱ ,	!		\$ -	ļ		\$	· -	Į.	1	0.01	871,680	1		0.01	871,680
6 Twin Single Track Drill&Blast (<6 Miles) 7 Twin Single Track TBM (<6 Miles)	Mile Mile	\$ 142,731,264 \$ 106,637,312	۱ ,			'\$ - \$ I			\$	· -	Į.	1	\$	-			\$	· -
8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$ 176,720,896	۱ ,	!		\$ -1	ļ		\$	- I	Į.	1	\$	 1 -	1		3	
9 Double Track Drill & Blast	Mile	\$ 146,887,680	۱ ,	l j	0	`\$ - 1	1		0 \$	- i			0 \$	-	1		0 \$	-
10 Double Track Mined (Soft Soil) Double Track TBM (<6 Miles)	Mile Mile	\$ 79,200,000 \$ 106,637,312	۱ ,	!		- \$ ' ا	ļ		\$	· - I	Į.	1	\$	-	1		\$	-
Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 176,720,896	۱ ,	!		, 1	ļ			İ	Į.	1	\$	- }	1		3	-
11 Seismic Chamber (Drill & Blast/Mined)	ea	\$ 126,205,952	۱ ,	!		`\$ •	1		\$	· -	l	1	\$	-	1		\$	-
12 Crossovers 13 Cut & Cover Double Track Tunnel	ea Mile	\$ 442,368 \$ 131,246,080	١ ,	۱	1 0				\$ n \$	` <u>.</u> 1) \$ n \$	· -	1		0 8	-
14 Trench Long (2 tracks) (1000 ft+)	Mile	\$ 57,524,224	۱ ,	l l	0.00 Miles		1		0.00 Miles \$	- <u> </u>			0.00 Miles \$	-	1		0.00 Miles \$	-
Trench Long (4 tracks) (1000 ft+) 15 Trench Short (2 tracks) (<1000 ft)	Mile Mile	\$ 86,286,336 \$ 78,843,904	۱ ,		0.00 Miles	, ¢ i			0.00 Miles	İ	Į.	1	0.00 Miles				0.00 Miles	
Trench Short (4 tracks) (<1000 ft)	Mile	\$ 78,843,904 \$ 118,265,856	١ ,	۱		· Ψ -			3	, - 			,	-	1		3	-
16 Mechanical & Electrical for Tunnels	Mile	\$ 11,848,704	۱ ,	!	0	\$	1		0 \$	· - I	l	1	0 \$	-	1		0 \$	-
17 Retaining Walls 18 Containment Walls	Mile Mile	\$ 8,613,888 \$ 5,907,456	۱ ,	!	0	'\$ - \$ I	ļ		0 \$	· - I	Į.	1	0 \$	-	1		0 \$	-
19 Single Track Cut and Cover Subway	Mile	\$ 131,246,080	۱ ,	l l		\$ -1	1		\$	- i			\$	 } -	1		3	
Four Track Drill & Blast	Mile	\$ 293,775,360	۱ ,			`\$ - 1			\$	· -	Į.	1	\$	-			\$	-
Four Track Mined (Soft Soil) Four Track TBM (<6 Miles)	Mile Mile	\$ 158,400,000 \$ 213,274,624	۱ ,	!		- • • • • • • • • • • • • • • • • • • •	ļ		\$	` <u> </u>	Į.	1	\$	· -	1		\$	-
Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 353,441,792	۱ ,	!		, , 1	1			İ	l	1	\$	-	1		\$	-
Four Track Cut & Cover Tunnel	Mile	\$ 262,492,160	۱ ,	!	0.00	'\$ - I	1		0.00 \$; - I			0.00 \$	-	1		0.00 \$	-
Grade Separations			۱ ,	۱ ۱		, I	1			İ					1			
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$ 13,284,352	۱ ,	!		\$ -1	1		\$	· -	l	1	\$	-	1		\$	-
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) 2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea ea	\$ 19,926,528 \$ 2,759,680	۱ ,	!		'\$ - \$	ļ		\$	· - 1	Į.	1	2 \$	39,853,056	1		2 \$	39,853,056
3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Suburban)	ea	\$ 2,759,680 \$ 2,029,568	۱ ,	۱					\$	-			\$	- : -	1		3	-
4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 3,563,520	۱ ,			\$ -			\$	· -	Į.	1	\$	-			\$	-
5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea ea	\$ 3,593,216 \$ 2,850,816	۱ ,	l j		'\$ - \$ I	1		\$	· 1			\$	-	1		\$	-
6 Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Undeveloped)	ea	\$ 3,171,328	!			, \$ - ₁	1	[\$, - -			\$,	1		3	-
	•		•	•	. '	•	•		1 .		•				•	. '	, ,	

COST ELEMENTS	UNIT	UNIT PRICE		Elevated Viaduct (2 tracks)			Elevated Viad	luct (4 tracks)			At-Grade	e (2 tracks)			At-Grade	(4 tracks)	
Subsection 6		Base: 2009		D			г					D			Г	2	
		(3rd Quarter)	Stort: 1040 - 00		.57 Miles	Start: 1940 + 00	End: 1970 + 00	0.57	Milos	Stort: 1040 - 00	End: 1970 + 00	D 0.57 N	Ailes	Start: 1940 + 00	End: 1970 + 00	0.57	Milos
		-	Start: 1940 + 00	E110: 1970 + 00 0	.57 MileS	Start: 1940 + 00	End: 1970 + 00	0.57	villes	Start: 1940 + 00	E110: 1970 + 00	U.57 IV	mies	Start: 1940 + 00	E110: 1970 + 00	0.57	Miles
Subsection Details	ı			Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile)			Start: 0 + 00	End: 0 + 00 0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			End: 1970 + 00	0.57 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)			Start: 1940 + 00			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Tunnel (Mile)		L	Start: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Trench (Mile)			Start: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)		-	Start: 0 + 00	0.00 Miles		Start: 0 + 00	F	0.00 Miles		Start: 0 + 00	FI 0 00	0.00 Miles		Start: 1940 + 00	End: 1970 + 00	0.57 Miles	
Four Track Elevated (Mile) Four Track Tunnel (Mile)		F	Start: 0 + 00 Start: 0 + 00	End: 0 + 00 0.00 Miles 0.00 Miles		Start: 1940 + 00 Start: 0 + 00	End: 1970 + 00	0.57 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	
Four Track Trench (Mile)		-	Start: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
7 Street Bridging HSR Trench	ea	\$ 1,398,784	Start. 0 1 00	0.00 Wiles	\$ -	Start. 0 + 00		0.00 Miles	\$ -	Start. 0 1 00		0.00 1111103	\$ -	Start: 0 1 00		0.00 1411103	\$ -
8 Minor Crossing Closures	ea	\$ 87,040			\$ -				\$ -				\$ -				\$ -
Building Items																	
1 Intermediate Passenger Stations	Each	\$ -			\$ -				\$ -				\$ -				\$ -
2 Terminal Passenger Stations	Each	\$ -			\$ -				\$ -				\$ -				\$ -
Caltrain Passenger Station - At-Grade	Each	\$15,000,000			\$ -				\$ -				\$ -				\$ -
Caltrain Passenger Station - On Structure	Each	\$15,000,000			-				\$ -				\$ -				\$ -
Caltrain Passenger Station - In Tunnel or Subway	Each	\$15,000,000			\$ -	1			• -				\$ -	1			- ·
Caltrain Passenger Station - In Trench 3 Maintenance Facility	Each Each	\$15,000,000 \$ 123,921,884			\$	1			• -				э - ¢				- ¢
4 Parking - Structures		φ 123,721,884 ¢			\$				\$				φ - \$				э •
5 Parking - At Grade	space space	\$ <u>-</u>			\$				\$ -				\$ -				\$ -
on army At Grade	Space	*							-				-	1			-
Rail & Utility Relocation														1			
1 Single Track Relocation (Temporary)	Mile	\$ 2,000,896			\$ -				\$ -				\$ -				\$ -
2 Single Track Relocation (Permanent)	Mile	\$ 2,000,896			\$ -				\$ -				\$ -				\$ -
3 Single Track Removal	Mile	\$ 130,048			\$ -				\$ -				\$ -				\$ -
4 Major Utility Relocations - Dense Urban	Mile	\$ 1,548,288			\$ -				\$ -				\$ -				\$ -
5 Major Utility Relocations - Urban	Mile	\$ 1,084,416			\$ -				\$ -				\$ -				\$ -
6 Major Utility Relocations - Dense Suburban	Mile	\$ 775,168			\$ -				\$ -				\$ -				-
7 Major Utility Relocations - Suburban	Mile	\$ 464,896			\$ -				\$ -				\$ -				\$ -
8 Major Utility Relocations - Undeveloped	Mile	\$ 30,720			\$ -				\$ -				\$ -	•			\$ -
ROW (Not Included)																	
ROW (Not included) ROW required for each segment																	
1 Dense Urban	Acre	\$ 2,786,321			\$ -				\$ -				\$ -				\$ -
2 Urban	Acre	\$ 1,371,510			- \$				\$ -				\$ -				\$ -
3 Dense Suburban	Acre	\$ 908,134			\$ -				\$ -				\$ -				\$ -
4 Suburban	Acre	\$ 208,418			\$ -				\$ -				\$ -				\$ -
5 Undeveloped	Acre	\$ 3,642			\$ -				\$ -				\$ -				\$ -
ROW required for Temp. Construction Easement																	
1 Dense Urban	Acre				\$ -				\$ -				\$ -				\$ -
2 Urban	Acre				-				\$ -				\$ -				-
3 Dense Suburban	Acre				-				\$ -				\$ -				\$ -
4 Suburban	Acre				-				\$ -				\$ -				-
5 Undeveloped Right-of-Way Required for Stations, Maintenance & Parking Facilities	Acre				-				\$ -				\$ -				\$ -
6 Dense Urban	Acre	\$ 2,786,321			\$				\$				\$				\$
7 Urban		\$ 1,371,510			\$ -				\$ -				* \$ -				\$ -
8 Dense Suburban	Acre	\$ 908,134			\$				\$ -				\$ -				\$ -
9 Suburban	Acre	\$ 208,418			- \$				\$ -				\$ -				\$ -
10 Undeveloped		\$ 3,642			\$ -				\$ -				\$ -				\$ -
Environmental Mitigation = 3% Line Costs					\$ 677,541				\$ 1,056,620				\$ 1,260,125	1			\$ 1,295,925
														1			
System Elements	[]							_						1		_	
1 Signaling (ATC)	Mile	\$ 2,070,000			.57 \$ 1,176,136			0.57	\$ 1,176,136			0.57	\$ 1,176,136			0.57	
2 Communications (w/ Fiber Optic Backbone)	Mile	\$ 540,000			.57 \$ 306,818			0.57	\$ 306,818			0.57 0.57				0.57	\$ 306,818
3 Wayside Protection System	Mile	\$ 108,000			.57 \$ 61,364			0.57	\$ 61,364			0.57	\$ 61,364	1		0.57	\$ 61,364
Electrification Items														1			
1 Traction Power supply	Mile	\$ 1,170,000		1	.57 \$ 664,773	.]		0.57	\$ 664,773			0.57	\$ 664,773			0.57	\$ 664,773
2 Traction Power Distribution		\$ 1,485,000			.57 \$ 843,750			0.57	\$ 843,750			0.57				0.57	
Si	ubtotal				\$ 26,315,083				\$ 39,330,115				\$ 46,317,150)			\$ 47,546,258
Program Implementation Costs (per screening)					\$ 6,710,346	1			\$ 10,029,179				\$ 11,810,873	1			\$ 12,124,296
Program Implementation Costs														1			
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1									A 0000 5				A 44 570 555	.			4 46 00 / 5 :=
Contingencies (per screening) (25%)					\$ 6,578,771				\$ 9,832,529				\$ 11,579,287	1			\$ 11,886,565
Subtotal					\$ 39,604,200		ı		\$ 59,191,823		1		\$ 69,707,310				\$ 71,557,118
Subtotal (Pounded)					\$ 40,000,000				\$ 59,191,823 \$ 50,000,000				\$ 69,707,310 \$ 70,000,000				\$ 72,000,000

COST ELEMENTS	UNIT	UNIT PRICE		Open Tren	ch (4 tracks)			Covere	d Trench			Tunnel (HST only)	
Subsection 6		Base: 2009 (3rd Quarter)			D				D				D	
		(=: = &&&(())	Start: 1940 + 00	End: 1970 + 00	0.57	Miles	Start: 1940 + 00	End: 1970 + 00	0.57 N	Miles	Start: 1940 + 00	End: 1970 + 00	0.57 Mile	S
Subsection Details		l			Quant.	Cost			Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile) Double Track Elevated (Mile)			Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00 End: 0 + 00	0.00 Miles 0.00 Miles	
Double Track Tunnel (Mile) Double Track Trench (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 1940 + 00 Start: 0 + 00	End: 1970 + 00	0.57 Miles 0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile) Four Track Elevated (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 : 00	0.00 Miles		Start: 0 + 00	End: 0 : 00	0.00 Miles	
Four Track Tunnel (Mile) Four Track Trench (Mile)		_	Start: 0 + 00 Start: 0 + 00 Start: 1940 + 00	End: 0 + 00 End: 1970 + 00	0.00 Miles 0.00 Miles 0.57 Miles		Start: 0 + 00 Start: 1940 + 00 Start: 0 + 00	End: 0 + 00 End: 1970 + 00 End: 0 + 00	0.00 Miles 0.57 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00 Start: 0 + 00	End: 0 + 00 End: 0 + 00 End: 0 + 00	0.00 Miles 0.00 Miles 0.00 Miles	
Double Track Section - Total 1 Double Track Section - At Grade	Mile	\$ 2,100,224			0.00	-			0.00	-			0.00 \$	-
Double Track Section - On Structure Double Track Section - In Tunnel or Subway Double Track Section - In Trench	Mile Mile Mile	\$ 4,700,160 \$ 4,700,160 \$ 4,700,160			0.00 0.00 0.00	-			0.00 0.00 0.00	-			0.00 \$ 0.57 \$ 0.00 \$	2,670,545
Four Track Section - Total Four-track Section - At Grade Four-Track Section - On Structure Four-Track Section - In Tunnel or Subway Four-Track Section - In Trench	Mile Mile Mile Mile	\$ 4,200,448 \$ 9,400,320 \$ 9,400,320 \$ 9,400,320			0.00 : 0.00 : 0.00 : 0.57 :	-			0.00 \$ 0.00 \$ 0.57 \$ 0.00 \$	5 5,341,091			0.00 \$ 0.00 \$ 0.00 \$ 0.00 \$	- - - -
Single Track - Total 5 Single Track Section - At Grade 6 Single Track Section - On structure 7 Single Track Section - In Tunnel or Subway 8 Single Track Section - In Trench	Mile Mile Mile Mile	\$ 1,549,312 \$ 2,350,080 \$ 2,350,080 \$ 2,350,080			0 : 0 : 0 :	-			0 5 0 5 0 5				0 \$ 0 \$ 0 \$	- - - -
9 Freight Double Track - At Grade 10 Freight Single Track - At Grade	Mile Mile	\$ 2,839,552 \$ 1,549,312			0 :				0 9				0 0 \$	-
Earthwork Items 1 Site Preparation - Undeveloped 2 Total Cut 3 Total Fill 4 Borrow 5 Spoil 6 Landscape erosion Control 7 Security Fencing (Both sides of ROW) 8 Special Drainage Facilities	Acre CY CY CY CY Acre Mile 5% Earl	\$ 9,216 \$ 6.00 \$ 6.00 \$ 13.00 \$ 13.00 \$ 6,144 \$ 144,384 thwork			7.58 48888.89 0.00 0.00 48888.89 7.58 0.57	\$ 2,933,333 \$ - \$ 6,355,556 \$ 46,545			7.58 \$ 48888.89 \$ 244444.44 \$ 0.00 \$ 244444.44 0.00 \$ 0.00 \$	2,933,333 1,466,667 3,177,778			0.00 \$ 0.00 \$ 0.00 \$ 0.00 \$ 0.00 \$ 0.00 \$ 0.00 \$ 0.00 \$	- - - - - -
Structures, Tunnels, Walls 1 Standard Structure (2 tracks) Standard Structure (4 tracks) 2 High Structure	Mile Mile Mile	\$ 34,972,672 \$ 52,459,008 \$ 40,424,448			0.00 Miles 0.00 Miles	-			0.00 Miles 0.00 Miles	-			0.00 Miles \$ 0.00 Miles \$	-
3 Long Span Structure 4 Waterway Crossing - Primary 5 Waterway Crossing - Secondary (Irrigation Canal) 6 Twin Single Track Drill&Blast (<6 Miles) 7 Twin Single Track TBM (<6 Miles) 8 Twin Single Track TBM w/3rd Tube (<6 Miles) 9 Double Track Drill & Blast	Mile Mile Mile Mile Mile Mile	\$ 61,919,232 \$ 85,342,208 \$ 92,049,408 \$ 142,731,264 \$ 106,637,312 \$ 176,720,896 \$ 146,887,680				-			0.01	6 697,344 6			0.01 \$ \$ \$ \$ \$ \$	697,344 - - - -
10 Double Track Mined (Soft Soil) Double Track TBM (<6 Miles) Double Track TBM w/3rd Tube (>6 Miles) 11 Seismic Chamber (Drill & Blast/Mined) 12 Crossovers	Mile Mile Mile ea ea	\$ 79,200,000 \$ 106,637,312 \$ 176,720,896 \$ 126,205,952 \$ 442,368				-				- - - -			0.00 \$ 0.57 \$	60,589,382
13 Cut & Cover Double Track Tunnel 14 Trench Long (2 tracks) (1000 ft+) Trench Long (4 tracks) (1000 ft+) 15 Trench Short (2 tracks) (<1000 ft) Trench Short (4 tracks) (<1000 ft)	Mile Mile Mile Mile Mile	\$ 131,246,080 \$ 57,524,224 \$ 86,286,336 \$ 78,843,904 \$ 118,265,856			0 : 0.00 : 0.57 :	-			0.00 0.00 9	; - ; -			0.00 \$ 0.00 \$ 0.00 \$	-
16 Mechanical & Electrical for Tunnels 17 Retaining Walls 18 Containment Walls 19 Single Track Cut and Cover Subway Four Track Drill & Blast Four Track Mined (Soft Soil) Four Track TBM (<6 Miles)	Mile Mile Mile Mile Mile Mile	\$ 11,848,704 \$ 8,613,888 \$ 5,907,456 \$ 131,246,080 \$ 293,775,360 \$ 158,400,000 \$ 213,274,624			!	-			0.57 0.00 3 3	6,732,218 6 - 6 - 6 - 6 -			0.57 0.00 \$ \$ \$ \$ 0.00 \$	6,732,218 - - - - - - -
Four Track TBM w/3rd Tube (>6 Miles) Four Track Cut & Cover Tunnel Grade Separations	Mile Mile	\$ 353,441,792 \$ 262,492,160			0.00	-			0.57	149,143,273			0.00 \$	-
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban) Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea ea ea ea ea ea ea	\$ 13,284,352 \$ 19,926,528 \$ 2,759,680 \$ 2,029,568 \$ 3,563,520 \$ 3,593,216 \$ 2,850,816 \$ 3,171,328				5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 -							\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	-

COST ELEMENTS	UNIT	UNIT PRICE		Open Tren	ch (4 tracks)			Covere	ed Trench			Tunnel ((HST only)	
Subsection 6	•	Base: 2009			D				D				D	
		(3rd Quarter)	Start: 1940 + 00	End: 1970 + 00	D 0.57	7 Miles	Start: 1940 + 00	End: 1970 + 00	D 0.57	Miles	Start: 1940 + 00	End: 1970 + 00	D 0.57 N	Miles
			Start: 1710 1 00	Ena. 1770 1 00	0.07	Wiles	Start. 1710 1 00	End. 1770 1 00	0.07	Willes	Start: 1710 1 00	E11d. 1770 1 00	0.07 11	vines
Subsection Details Double Track At-Grade (Mile)			Ctart. 0 : 00	End: 0 : 00	Quant.	Cost	Ctort. 0 . 00	End. 0 . 00	Quant.	Cost	Ctart. 0 . 00	End. 0 : 00	Quant.	Cost
Double Track At-Grade (Mile)			Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00 End: 0 + 00	0.00 Miles 0.00 Miles	
Double Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1940 + 00	End: 1970 + 00	0.57 Miles	
Double Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00	F1 0 00	0.00 Miles		Start: 0 + 00	F1 0 00	0.00 Miles		Start: 0 + 00	FI 0 00	0.00 Miles	
Four Track Elevated (Mile) Four Track Tunnel (Mile)			Start: 0 + 00 Start: 0 + 00	End: 0 + 00 End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 1940 + 00	End: 0 + 00	0.00 Miles 0.57 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00 End: 0 + 00	0.00 Miles 0.00 Miles	
Four Track Trench (Mile)			Start: 1940 + 00	End: 1970 + 00	0.57 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
7 Street Bridging HSR Trench	ea	\$ 1,398,784				\$ -			2	\$ 2,797,568			5	-
8 Minor Crossing Closures	ea	\$ 87,040				\$ -				\$ -			5	-
Building Items														
1 Intermediate Passenger Stations	Each	\$ -				\$ -				\$ -			9	\$ -
2 Terminal Passenger Stations	Each	\$ -				\$ -				\$ -				-
Caltrain Passenger Station - At-Grade	Each	\$15,000,000				\$ -				\$ -			9	-
Caltrain Passenger Station - On Structure	Each	\$15,000,000				-				\$ -				-
Caltrain Passenger Station - In Tunnel or Subway Caltrain Passenger Station - In Trench	Each Each	\$15,000,000 \$15,000,000								\$ -				- t
3 Maintenance Facility	Each	\$ 123,921,884				\$ -				\$ -				- \$
4 Parking - Structures	space					\$ -				\$ -				-
5 Parking - At Grade	space					\$ -				\$ -				-
D II A HIII'I D I II'														
Rail & Utility Relocation 1 Single Track Relocation (Temporary)	Mile	\$ 2,000,896				•				•				
2 Single Track Relocation (Permanent)	Mile	\$ 2,000,896				\$ -				\$ -				, - \$ -
3 Single Track Removal	Mile	\$ 130,048				\$ -				\$ -				-
4 Major Utility Relocations - Dense Urban	Mile	\$ 1,548,288				\$ -				\$ -				-
5 Major Utility Relocations - Urban	Mile	\$ 1,084,416				-				\$ -				-
6 Major Utility Relocations - Dense Suburban 7 Major Utility Relocations - Suburban	Mile Mile	\$ 775,168 \$ 464,896				-				\$ -				- -
8 Major Utility Relocations - Suburban 8	Mile	\$ 404,890				\$ -				\$ -				· -
o major only relocations ondereloped	IVIIIC	\$ 30,720				•				•			l \	•
ROW (Not Included)														
ROW required for each segment														
1 Dense Urban 2 Urban	Acre Acre	\$ 2,786,321 \$ 1,371,510				-				-				-
3 Dense Suburban	Acre	\$ 1,371,510 \$ 908,134				\$ -				\$ -				· -
4 Suburban	Acre	\$ 208,418				\$ -				\$ -				-
5 Undeveloped	Acre	\$ 3,642				\$ -				\$ -				-
ROW required for Temp. Construction Easement														
1 Dense Urban 2 Urban	Acre Acre					-				-				-
3 Dense Suburban	Acre					\$ -				\$ -				· -
4 Suburban	Acre					-				\$ -				-
5 Undeveloped	Acre					\$ -				\$ -				-
Right-of-Way Required for Stations, Maintenance & Parking Facilities														
6 Dense Urban 7 Urban		\$ 2,786,321 \$ 1,371,510				\$ - \$ -				-				5 -
8 Dense Suburban	Acre Acre	\$ 1,371,510				\$ -				\$ -				· -
9 Suburban	Acre	\$ 208,418				\$ -				\$ -				-
10 Undeveloped	Acre	\$ 3,642				\$ -				\$ -			5	-
Environmental Mitigation = 3% Line Costs						\$ 1,950,792				\$ 5,182,244				\$ 2,120,685
System Elements														
1 Signaling (ATC)	Mile	\$ 2,070,000			0.57	\$ 1,176,136			0.57	\$ 1,176,136]	0.57	\$ 1,176,136
2 Communications (w/ Fiber Optic Backbone)	Mile	\$ 540,000			0.57	\$ 306,818			0.57				0.57	
3 Wayside Protection System	Mile	\$ 108,000			0.57				0.57				0.57	
Floatrification Itama														
Electrification Items 1 Traction Power supply	Mile	\$ 1,170,000			0.57	\$ 664,773			0.57	\$ 664,773			0.57	\$ 664,773
2 Traction Power Distribution	Mile	\$ 1,170,000			0.57				0.57				0.57	
S	Subtotal	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				\$ 70,030,049			5.07	\$ 180,976,555				\$ 75,863,015
Program Implementation Costs (per screening)						\$ 17,857,662				\$ 46,149,021				\$ 19,345,069
Program Implementation Costs		1												
Contingencies (per screening) (25%)		1				\$ 17,507,512				\$ 45,244,139]		\$ 18,965,754
Contingencies (per screening) (2370)		1				Ψ 17,007,012				ψ 1 0,244,139				y 10,700,704
Subtotal		1				\$ 105,395,224		•		\$ 272,369,715			9	\$ 114,173,838
Subtotal (Pounded)						\$ 105,000,000				\$ 272,000,000				\$ 114,175,050

		7A & 7B (2.9 miles)			7C & 7D (2.8 miles)	
Subsection 7	Aerial Viaduct	At Grade	Open Trench	Covered Trench/Tunnel	Aerial Viaduct	At Grade	Open Trench	Covered Trench/Tunnel
Capital Cost (\$2009 in Millions) does not include ROW	\$ 344 <u>424</u>	\$ 155	\$ 615 <u>583</u>	\$1,433	\$ 99 <u>219</u>	\$ 107 <u>128</u>	\$ 540 <u>510</u>	\$1,323
Acquisition Cost of Permanent ROW	Medium	Highest	Medium	Lowest	Medium	Highest	Medium	Lowest
Notes:	 Caltrain San Antonio and Mountain View stations. Potential HST Mountain View station (costs not included). Convert Shoreline Blvd to an underpass. 	 Caltrain San Antonio and Mountain View stations. Potential HST Mountain View station (costs not included). Grade separation at Rengstorff Ave and Castro St. 	 Caltrain San Antonio and Mountain View stations. Potential HST Mountain View station (costs not included). 	 Caltrain San Antonio and Mountain View stations. Potential HST Mountain View station (costs not included). 	Caltrain Sunnyvale station. Aerial only in the vicinity of Mary Ave.	Caltrain Sunnyvale station. Grade separations at Mary Ave and Sunnyvale Ave.	1 Caltrain Sunnyyalo	1. Caltrain Sunnyvale station.

COST ELEMENTS	UNIT UNIT	PRICE	Elevated Viaduct (4 tracks)			At-Grade (4 tra	racks)			Open Trenc	ch (4 tracks)			Covered Tre	ench (4 tracks)	
Subsection 7		2009 (3rd Start: 1970 + 00 E	A nd: 2025 + 00	04 Miles	Start: 1970 + 00	End: 2025 3 00	1.04 Miles	$ \longrightarrow $	Start: 1970 + 00	End- 2025 - 00	A 1.04 N	Viles	Start: 1970 + 00	End: 2025 - 00	A 1.04 N	Miles
	Qu	larter) Start: 1970 + 00 E			Statt. 1970 + 00				Start. 1970 + 00	LIIU. 2020 + 00			Start. 1970 + 00	LIIU. 2020 + 00		
Subsection Dedtails Double Track At-Grade (Mile)		Start: 0 + 00	Quant. End: 0 + 00 0.00 Miles	Cost	Start: 1970 + 00		Quant. 1.04 Miles	Cost	Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost	Start: 0 - 00	End: 0 + 00	Quant. 0.00 Miles	Cost
Double Track At-Grade (Mile)		Start: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles	-	Start: 0 + 00 Start: 0 + 00	L.10. U + UU	0.00 Miles		Start: 0 + 00	E110. U + UU	0.00 Miles	
Double Track Tunnel (Mile)		Start: 0 + 00	0.00 Miles	\exists	Start: 0 + 00	0.	0.00 Miles	ţ	Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Trench (Mile)		Start: 0 + 00	0.00 Miles	_	Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile) Four Track Elevated (Mile)		Start: 0 + 00 Start: 1970 + 00 E	0.00 Miles End: 2025 + 00 1.04 Miles	-	Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	F	Start: 0 + 00 Start: 0 + 00	End: 0 - 00	0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 : 00	0.00 Miles	
Four Track Elevated (Mile) Four Track Tunnel (Mile)		Start: 1970 + 00 E Start: 0 + 00	nd: 2025 + 00 1.04 Miles 0.00 Miles	-	Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00 End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 1970 + 00	End: 0 + 00 End: 2025 + 00	0.00 Miles 1.04 Miles	
Four Track Trench (Mile)		Start: 0 + 00	0.00 Miles	1	Start: 0 + 00		0.00 Miles	}	Start: 1970 + 00	End: 2025 + 00	1.04 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	_
Double Track Section - Total					1									1		
1 Double Track Section - At Grade		2,100,224		00 \$	- i			2,187,733		•	0.00			۱ ,	0 3	\$ -
2 Double Track Section - On Structure 3 Double Track Section - In Tunnel or Subway		4,700,160 4,700,160		00 \$	-		0.00 \$ 0.00 \$	-		•	0.00			۱ ,	0 2	\$ - \$
3 Double Track Section - In Tunnel or Subway 4 Double Track Section - In Trench		4,700,160 4,700,160		00 \$.		0.00 \$	-			0.00			۱ ,	U	\$
	J Ψ		U.		i		0.00	-			0.00			۱ ,		,
Four Track Section - Total				1.	i									۱ ,		
Four-track Section - At Grade		4,200,448		00 \$	-	1	0.00 \$	-	ļ		0.00			l i	0.00	\$ -
Four-Track Section - On Structure Four-Track Section - In Tunnel or Subway		9,400,320 9,400,320		04 \$ 9,792,000 00 \$	۱ ا	1	0 \$	-			0.00			l i	0.00 S 1.04 S	\$ - \$ 9,792,000
Four-Track Section - In Tunnel or Subway Four-Track Section - In Trench		9,400,320 9,400,320		00 \$,	ı l	0 \$ 0 \$	-	J		0.00 1.04			l i	1.04 S 0.00 S	
		= = =	J	•	1	ı l	∪ \$	-			1.04	1,172,UUL		1	0.00	-
Single Track - Total			[1	ı l								1		
5 Single Track Section - At Grade		1,549,312	I	U \$	- [ı l	0 \$	-	J		0	\$ -		l i	0 ;	\$ -
6 Single Track Section - On structure 7 Single Track Section - In Tunnel or Subway		2,350,080	I	0 \$	-	1	0 \$	-	ļ		0	\$ - \$		l i	0	\$ - \$
7 Single Track Section - In Tunnel or Subway 8 Single Track Section - In Trench		2,350,080 2,350,080	I	0 \$,]	1	U \$	-	J		0	\$		۱ ،		\$
					i	1	٥	-			U			۱ ،		-
9 Freight Double Track - At Grade		2,839,552		0 \$	- i	1	0 \$	-]			0	\$ -		۱ ،	0 3	\$ -
10 Freight Single Track - At Grade		1,549,312		0 \$	- i	1	0 \$	-			0	\$ -		۱ ،	0 ;	\$ -
Earthwork Items					1	1								۱ ،		
Earthwork Items 1 Site Preparation - Undeveloped	Acre \$	9,216	10	89 \$ 128,000	۱ ا	ı l	8.21 \$	75,636	J		13.89	\$ 128,000		l i	13.89	\$ 128,000
2 Total Cut	CY \$	6.45	13.	0 \$, [ı l	0.00 \$. 0,030			448148.15	\$ 2,891,093		l ,	1120370.37	\$ 7,227,733
3 Total Fill	CY \$	6.29	I	0 \$	-]	1	0.00 \$	-1	J		0.00	\$ -		۱ ،	672222.22	\$ 4,228,224
4 Borrow	CY \$	12.58		00 \$	- [ı l	0.00 \$	-			0.00	\$ -		l ,	0.00	\$ -
5 Spoil 6 Landscape erosion Control	CY \$	12.58		00 \$	- i	1	0.00 \$	-	J		448148.15			۱ ،	448148.15	
6 Landscape erosion Control 7 Security Fencing (Both sides of ROW)	Acre \$ Mile \$	6,144 144,384		00 \$	- 	1	0.00 \$ 0.00 \$	-	J		13.89 1.04			۱ ،	0.00 \$	
7 Security Fencing (Both sides of ROW) 8 Special Drainage Facilities	Mile \$ 5% Earthwork	ייטטקדד ו	0.	00 \$ 6,400	۱ ا	1	U.UU \$	3,782			1.04	\$ 150,400 \$ 444,623		۱ ،	0.00	\$ - \$ 861,079
	Zaranviolik		[. 0,40	1	ı l	•	5,102				++4,0Z3		1		001,079
Structures, Tunnels, Walls		1070 (==	I	10 4	i	Į l	A = : :					•		l 1		İ
1 Standard Structure (2 tracks)		34,972,672		00 \$	- 1	1	0.00 Miles \$	-			0.00	\$ -		l ,	0.00	\$ -
Standard Structure (4 tracks) 2 High Structure		<mark>52,459,008</mark> 40,424,448	1.	04 \$ 54,644,800 \$	۱ ۱	ı l	0.00 Miles				0.00	\$		l ,	0.00	\$
2 High Structure 3 Long Span Structure		40,424,448 61,919,232	[\$, [ı l	\$	-				\$		l ,		\$
4 Waterway Crossing - Primary	Mile \$ 8	85,342,208		\$.		\$	-		•		\$ -		۱ ,		\$ -
5 Waterway Crossing - Secondary (Irrigation Canal)	Mile \$ 9	92,049,408	0.	02 \$ 1,743,360	ı ا		0.01 \$	871,680		•		\$ -		۱ ,		\$ -
6 Twin Single Track Drill&Blast (<6 Miles)		42,731,264		\$	-		\$	-		•		\$ -		۱ ,] :	\$ -
7 Twin Single Track TBM (<6 Miles)		06,637,312 76,720,806		\$	-		\$	-		•		\$ - \$ -		۱ ,	j - 1:	\$ -
8 Twin Single Track TBM w/3rd Tube (<6 Miles) 9 Double Track Drill & Blast		76,720,896 46,887,680	0	00 \$	1		0 \$	-		•	0.00	Ψ		۱ ,	0.00	\$
10 Double Track Mined (Soft Soil)	Mile \$ 79	92,000,000	J	\$	·		\$	-		ļ	0.00	\$ -		۱ ,	3.00	\$ -
Double Track TBM (<6 Miles)	Mile \$ 10	06,637,312	I		1	ı l	\$	-	J					l i		
Double Track TBM w/3rd Tube (>6 Miles)	Mile \$ 17	76,720,896	I	¢.	1	ı l	\$	-	J			¢		l i		¢
11 Seismic Chamber (Drill & Blast/Mined) 12 Crossovers	ea \$ 12 ea \$	26,205,952 442,368	I	\$	- i	1	\$	-	J			\$ - \$		۱ ،		\$ - \$
13 Cut & Cover Double Track Tunnel		442,368 31,246,080	0	00 \$,]	1	0 6	- 1	J		0.00	\$		۱ ،	0.00	\$
14 Trench Long (2 tracks) (1000 ft+)	Mile \$ 5	57,524,224	0.	00 \$.]	1	0.00 Miles \$	- [J		0.00	\$ -		۱ ،	0.00	\$ -
Trench Long (4 tracks) (1000 ft+)	Mile \$ 8	86,286,336	0.	00	i	Į l	0.00 Miles				1.04		1	l 1	0.00	
15 Trench Short (2 tracks) (<1000 ft)	Mile \$ 7	78,843,904	I	\$	- [Į l	\$	-		·		\$ -		l 1		\$ -
Trench Short (4 tracks) (<1000 ft) 16 Mechanical & Electrical for Tunnels		<mark>18,265,856</mark> 11,848,704	-	00 \$	i	Į l	0 *				0.00	\$		l 1	1.04	\$ 12,342,400
16 Mechanical & Electrical for Tunnels 17 Retaining Walls		11,848,704 8,613,888	0.	00 \$ 00 \$, [ı l	0 \$ 0 ¢	- 1			0.00		1	l ,	1.04 S 0.00 S	
18 Containment Walls		5,907,456	0.	\$.		\$	-		·	0.00		·	۱ ,	0.00	\$ -
19 Single Track Cut and Cover Subway	Mile \$ 13	31,246,080		\$	-		\$	-		·	0.00	\$	1 .	۱ ,		\$ -
Four Track Drill & Blast	Mile \$ 29	93,775,360		\$	-		\$	-		•		\$ -		۱ ,		\$ -
Four Track Mined (Soft Soil)		84,000,000		\$	- i		\$	-		•		\$ -		۱ ,	Į:	•
Four Track TBM (<6 Miles) Four Track TBM w/3rd Tube (>6 Miles)		13,274,624 53,441,792			1		\$	-		•				۱ ,		
Four Track Cut & Cover Tunnel		62,492,160	0	00 \$.		0.00 \$	-		•	0.00	\$ -		۱ ,	1.04	\$ 273,429,333
					i					•	5.00			۱ ,		.,,,500
Grade Separations		2004.055			1					·		•	1	۱ ,		
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)		13,284,352		1 \$ 10.007.55			\$	-		ļ		\$ -		۱ ,] [:	\$ ¢
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) 2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)		19,926,528 2,759,680		1 \$ 19,926,528	۱ ۱		U \$	-		ļ].	\$		۱ ،		\$ - \$
2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) 3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)		2,029,568		\$.		\$	-		ļ		\$ -		۱ ،		\$ -
4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea \$	3,563,520		0 \$	·		0 \$	-		ļ].	\$ -		۱ ،		\$ - 1
5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea \$	3,593,216		\$	- i		\$	-		ļ	Į.	\$ -		۱ ,		\$ - 1
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea \$	2,850,816		\$	-		\$	-		ļ		\$ -		۱ ,] ;	\$ -
6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea \$	3,171,328		\$	-1 .	τ	\$	-		:		\$ -	1	۱ .	1 15	\$ -
7 Street Bridging HSR Trench		1,398,784	l l			1	11	1	I			\$ 4,196,352			1	•

COST ELEMENTS	UNIT	UNIT PRICE		Elevated Via	iduct (4 tracks)			At-Grade	e (4 tracks)		Open Tre	nch (4 tracks)			Covered Tre	nch (4 tracks)	
Subsection 7		Base: 2009 (3rd			A				A			Α				A	
		Quarter)	Start: 1970 + 00	End: 2025 + 00	1.04	Miles	Start: 1970 + 00	End: 2025 + 00	1.04 l	Miles	Start: 1970 + 00 End: 2025 + 00	1.04 Mile	es	Start: 1970 + 00	End: 2025 + 00	1.04 M	les
Subsection Dedtails					Quant.	Cost			Quant.	Cost		Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles	COST	Start: 1970 + 00	End: 2025 + 00	1.04 Miles	COSt	Start: 0 + 00 End: 0 + 00	0.00 Miles	COSt	Start: 0 + 00	End: 0 + 00	0.00 Miles	COSt
Double Track Elevated (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile) Four Track Elevated (Mile)			Start: 0 + 00	End: 2025 + 00	0.00 Miles 1.04 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00 End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	
Four Track Elevated (Mile)			Start: 0 + 00	E110: 2025 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00 End: 0 + 00 Start: 0 + 00 End: 0 + 00	0.00 Miles		Start: 1970 + 00	End: 2025 + 00	1.04 Miles	
Four Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1970 + 00 End: 2025 + 00	1.04 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
8 Minor Crossing Closures	ea	\$ 87,040				\$ -				\$ -		\$	-			\$	-
Building Items										•							
1 Intermediate Passenger Stations 2 Terminal Passenger Stations	Each Each					\$ -				\$ -		\$	-			\$	-
Caltrain Passenger Station - At-Grade	Each	\$15,000,000				\$ -			1	\$ 15,000,000		\$	-			\$	-
Caltrain Passenger Station - On Structure	Each	\$15,000,000			1	\$ 15,000,000				\$ -		\$	-			\$	-
Caltrain Passenger Station - In Tunnel or Subway	Each	\$15,000,000				\$ -				\$ -		\$	-			\$	-
Caltrain Passenger Station - In Trench	Each	\$15,000,000				\$ -				\$ -		1 \$	15,000,000			1 \$	15,000,000
3 Maintenance Facility	Each					-				\$ -		\$	-			\$	-
4 Parking - Structures	space	\$ -				-				-		\$	-			\$	-
5 Parking - At Grade	space	•				φ -				φ -			-			3	-
Rail & Utility Relocation																	
1 Single Track Relocation (Temporary)	Mile	\$ 2,000,896				\$ -				\$ -		\$	-			\$	-
2 Single Track Relocation (Permanent)	Mile	\$ 2,000,896				\$ -				\$ -		\$	-			\$	-
3 Single Track Removal	Mile	\$ 130,048				-				\$ -		\$	-			\$	-
4 Major Utility Relocations - Dense Urban	Mile	\$ 1,548,288				-				\$ -		\$	-			\$	-
5 Major Utility Relocations - Urban 6 Major Utility Relocations - Dense Suburban	Mile Mile	\$ 1,084,416 \$ 775,168				\$ -				\$ -		\$	-			\$	-
7 Major Utility Relocations - Suburban	Mile	\$ 464,896				\$ -				\$ -		\$	_			\$	-
8 Major Utility Relocations - Undeveloped	Mile	\$ 30,720				\$ -				\$ -		\$	-			\$	-
ROW (Not Included)																	
ROW required for each segment		4 0 70/ 004								•							
1 Dense Urban 2 Urban	Acre Acre	\$ 2,786,321 \$ 1,371,510				-						\$	-			\$	-
3 Dense Suburban	Acre	\$ 908,134				\$ -				\$ -		\$	-			\$	
4 Suburban	Acre	\$ 208,418				\$ -				\$ -		\$				\$	
5 Undeveloped	Acre	\$ 3,642				\$ -				\$ -		\$	-			\$	-
ROW required for Temp. Construction Easement	Acre											\$	-				
1 Dense Urban	Acre					-				\$ -		\$	-				
2 Urban 3 Dense Suburban	Acre Acre									\$ -		\$	-				
4 Suburban	Acre					\$ -				\$ -		\$	-				
5 Undeveloped	Acre					\$ -				\$ -		\$					
Right-of-Way Required for Stations, Maintenance & Parking Facilities												\$	-				
6 Dense Urban	Acre	\$ 2,786,321				\$ -				\$ -		\$	-			\$	-
7 Urban	Acre	\$ 1,371,510				-				\$ -		\$	-			\$	-
8 Dense Suburban 9 Suburban	Acre	\$ 908,134 \$ 208,418				\$ -				\$ - \$ -		\$				\$	-
10 Undeveloped	Acre Acre	\$ 208,418				\$ -				\$ -		\$	-			\$	
Environmental Mitigation = 3% Line Costs	71010	0,012				\$ 3,037,233				\$ 544,165		\$	3,846,211			\$	9,859,392
													•				-
System Elements																	
1 Signaling (ATC)	Mile	\$ 2,070,000			1.04				1.04			1.04 \$	2,156,250			1.04 \$	2,156,250
2 Communications (w/ Fiber Optic Backbone) 3 Wayside Protection System	Mile Mile	\$ 540,000 \$ 108,000			1.04 1.04				1.04 1.04			1.04 \$ 1.04 \$	562,500 112,500			1.04 \$ 1.04 \$	562,500 112,500
Sivayside Fiolection System	iville	φ 100,000			1.04	φ 112,300			1.04	ψ 112,300		1.04 \$	112,000			1.04 \$	112,000
Electrification Items																	
1 Traction Power supply	Mile	\$ 1,170,000			1.04				1.04			1.04 \$	1,218,750			1.04 \$	1,218,750
2 Traction Power Distribution	Mile	\$ 1,485,000			1.04		ļ		1.04			1.04 \$	1,546,875			1.04 \$	1,546,875
Subi	total					\$ 109,875,196				\$ 24,279,871		\$	137,650,120			\$	344,102,669
Program Implementation Costs (per screening)						\$ 28,018,175				\$ 6,191,367		\$	35,100,781			\$	87,746,181
Program Implementation Costs																	
Contingencies (per screening) (25%)						\$ 27,468,799				\$ 6,069,968		\$	34,412,530			\$	86,025,667
					<u> </u>							<u> </u>		<u> </u>			
Subtotal						\$ 165,362,169				\$ 36,541,207		\$	207,163,430			\$	517,874,517
Subtotal (Rounded)						\$ 165,000,000				\$ 37,000,000	L		207.000.000	1			518.000.000

Grade Separations	COST ELEMENTS	UNIT	UNIT PRICE		Elevated Via	duct (4 tracks)			At-Grade	(4 tracks)			Open Tren	ch (4 tracks)			Covered Tre	ench (4 tracks)	
Part Part	Subsection 7		Base: 2009	01-4 0005 05	E-1 0405 05	В	M1	C11 0005 55	F=4 0405 05	3		C11 0005 05	F-4 040F 05	В	MASS -	Ct 2005 55	Full 0405 00	В	A11
State 1985				Start: 2025 + 00	End: 2125 + 00	1.89	Villes	Start: 2025 + 00	End: 2125 + 00	1.89 Mile	es .	Start: 2025 + 00	End: 2125 + 00	1.89 [Miles	Start: 2025 + 00	End: 2125 + 00	1.89 N	Villes
The Control of Contr		ļ					Cost				Cost				Cost			Quant.	Cost
March Marc					End: 0 + 00				End: 0 + 00		T		End: 0 + 00				End: 0 + 00		
Section Sect									+		}						1		
The manufal Market The Property of Property The Property of Property The Property of Property The Property of Property The Property of Property The Property of Property The Property of Property The Property of Property The Property of Property The Property of Property The Property of Property The Property of Property The Property of Property The Property The Property of Property The Property of Property The Property	Double Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Control Cont	· · ·				End. 010E 00				End: 2125 + 00						·				·
See Performance 1967 196					End: 2125 + 00						ŀ	_	Fnd· 0 ± 00				Fnd: 2125 ± 00		
Treat Principles Served Scale 90 3 2,000 90 5 100 90 90 90 90 90 90 9									<u> </u>										
2 2 2 2 2 2 2 2 2 2																			
School Procedure 1985 19											-								
Part Table Serve Transport Serve Transport Serve											-								
											-								
	Face Tarely Continue Tatal																		
Total Content		Mile	\$ 4 200 448			0.00	\$.			1 80 \$	7 955 394			0.00	\$.			0.00	\$
Part Part										0 \$	- 1,733,374							0.00	\$
September Sept										0 \$	-							1.89	\$ 17,803,63
Specific Section Victor	Four-Track Section - In Trench	Mile	\$ 9,400,320			0.00	\$ -			0 \$	-			1.89	\$ 17,803,636			0.00	\$
2-50mg 1.50mg 1	Single Track - Total																		
Spanish Residue Numeri Sassany Name 2,2028	5 Single Track Section - At Grade					0	\$ -			0 \$	-			0	\$ -			0	\$
Segret from the content March St. S. S. S. S. S. S. S						0	-			0 \$	-			0	\$ -			0	\$
Company Comp						0	\$ - \$ -			0 \$ 0 \$	-			0	\$ -			0 :	\$ \$
Climate State March September March September March September March September March September March September March September March September Septembe	Some rider couldn't in Hollon	IVIIIC					-				-			l	-				*
Company Comp						0	\$ -			0 \$	-			0	\$ -			0	\$
Spin registration April Spin registration Spin registratio	10 Freight Single Track - At Grade	Mile	\$ 1,549,312			0	\$ -			0 \$	-			0	\$ -			0	\$
Treat Col	Earthwork Items																		
	1 Site Preparation - Undeveloped					25.25	\$ 232,727			0.00 \$	-								
Company Comp						0	-			0 \$	-								
Signate Color Signate Color Signate Color Signate Color Signate Color Signate Color Signate Color Signate Color Signate Color Signate Color Signate Color Signate Color Signate Color Signate Color Signate Color Signate Color Signate Color Signate Signate Color Signate Color Signate Color Signate Sign						0	\$ -			0 \$	-								\$ 5,125,120 \$
Content Cont						0.00 0.00	φ - \$ -				-								\$ \$ 10,250,240
Security serving (orange serving (storage) Security serving (storage)			\$ 6,144								-								
Structures Turners, Walls Structures Turners, Walls Structures Turners, Walls Structures Turners, Walls Structures Turners	7 Security Fencing (Both sides of ROW)	Mile	\$ 144,384				\$ -								\$ 273,455				\$
Shared Sharare (brack) Ability S. 34,779,77 0.00 S	8 Special Drainage Facilities	5% Earth	nwork				\$ 11,636			\$	13,673				\$ 1,583,744				\$ 1,306,058
Sharened Standard (4 rocks)	Structures, Tunnels, Walls																		
2 Helph Standare	1 Standard Structure (2 tracks)]			-				\$ -				\$
Signal Studies Sign										0.00 Miles				0.00	\$			0.00 Miles	¢
Alwahersy Orschip Primary Mile \$ 8,342,208 \$ 5						0.00	\$ -			\$	-				\$ -				\$
6 Tam Singly Track DistRiblates 6 Allies 5 5 5 5 5 5 5 5 5		Mile	\$ 85,342,208				\$ -			\$	-				\$ -				\$
Tom Single Track FBM (46 Milles)	5 Waterway Crossing - Secondary (Irrigation Canal)					0.02	\$ 1,743,360			0.03 \$	2,615,040				\$ -			0.01	\$ 697,34
S Ton Single Track TBM wilder I tale Sist	6 Iwin Single Track Drill&Blast (<6 Miles) 7 Twin Single Track TRM (<6 Miles)		\$ 142,731,264 \$ 106,637,212				\$ - \$			\$	-				\$ -				\$ \$
Double Track Mine Sale Sale Double Track Mine Sale Sa							\$ -			\$	-				\$ -				\$
Double Track TBM (c6 Miles) Mile \$106,637,312	9 Double Track Drill & Blast	Mile					*			0 \$	-				Ψ			0	\$
Double Track TBM w/3rd Tube (-6 Miles)							\$ -			\$	-				\$ -				\$
15 Seinic Chamber (prill a Blast Minner)																			
12 Corssorers							\$ -			\$	_				\$ -				\$
14 Terech Long (2 Yzacks) (1000 ft)	12 Crossovers	ea	\$ 442,368				\$ -			\$	-				\$ -				\$
Temph Long (2 tracts) (2 tracts) (2 tracts) (2 tracts) (2 tracts) (2 tracts) (3 tracts) (3 tracts) (3 tracts) (3 tracts) (4 tracts) (2 tracts) (3 tracts) (3 tracts) (4 tracts) (2 tracts) (3 tracts) (3 tracts) (4 tracts) (2 tracts) (3 tracts) (3 tracts) (4 tracts) (4 tracts) (2 tracts) (3 tracts) (3 tracts) (4 tracts										0 \$	-							0	\$
STRENG Short (2 tracks) (-1000 ft) Mile ST8,843,904 ST8,843,904 ST8,845,955 ST8,845,955 ST8,845,955 ST8,845,955 ST8,845,955 ST8,845,955 ST8,845,955 ST8,845,955 ST8,845,955 ST8,845,955 ST8,845,955 ST8,845,955 ST8,845,955 ST8,845,955 ST8,845,955 ST8,845,955 ST8,845,955 ST8,855,955						0.00	> -				-								\$
Trench Short (4 tracks) (< 1000 ft)										v.uu ivilles	_			1.89	\$ 103,421,091			0.00	\$
17 Retaining Walls 8 Containment Walls 18 Containment Walls 19 Single Track Cut and Cover Subway 19 Single Track Cut and Cover Subway 19 Single Track Cut and Cover Subway 19 Four Track Drill & Blast 19 Four Track Blast 19 Four Track Blast 19 Four Track Blast 19 Single Track Cut and Cover Subway 19 Single T	Trench Short (4 tracks) (<1000 ft)	Mile	\$ 118,265,856				•			*									
18 Containment Walls 19 Single Track Cut and Cover Subway 5 Four Track Cut and Cover Subway 6 Four Track Mined (Soft Soil) 6 Four Track Mined (Soft Soil) 6 Four Track Mined (Soft Soil) 6 Four Track Mined (Soft Soil) 6 Four Track Mined (Soft Soil) 7 Four Track Cut & Cover Tunnel 7 Four Track Cut & Cover Tunnel 8 S 5,907,456 8 S -						0.00	\$ -			0 \$	-								
19 Single Track Cut and Cover Subway Four Track Drill & Blast Four Track Drill & Blast Four Track Drill & Blast Four Track Miles Four Track Miles Four Track TBM (soft Soil) Four Track TBM (soft Soil) Four Track TBM w3rd Tube (soft Miles) Four Track Cut & Cover Tunnel Grade Separations 1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) Ea S 13,284,352 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Urban) Ea S 19,926,528 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) Ea S 1,259,880 Ea S 2,029,568 Ea S 3,883,056 Ea S										0 \$	-							0.00	\$ \$
Four Track Drill & Blast							\$ -			\$	-			0.00	\$ -				\$
Four Track TBM (<6 Miles) Four Track TBM w/3rd Tube (>6 Miles) Four Track Cut & Cover Tunnel Grade Separations Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Urban) Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Undeveloped) Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Undeveloped) Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Undeveloped) Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Undeveloped) Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Undeveloped) Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Undeveloped) Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Undeveloped) Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Undeveloped) Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Undeveloped) Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Undeveloped) Roadway Crossing HSR - 5 Roadway Under 4 Tracks (Undeveloped) Roadway Crossing HSR - 5 Roadway Under 4 Tracks (Undeveloped) Roadway Crossing HSR - 5 Roadway Under 4 Tracks (Undeveloped) Roadway Crossing HSR - 5 Roadway Under 4 Tracks (Undeveloped) Roadway Crossing HSR - 5 Roadway Under 4 Tracks (Undeveloped) Roadway Crossing HSR - 5 Roadway Under 4 Tracks (Undeveloped) Roadway Crossing HSR - 5 Roadway Under 4 Tracks (Undeveloped) Roadway	Four Track Drill & Blast	Mile	\$ 293,775,360				\$ -			\$	-				\$ -				\$
Four Track TBM w/3rd Tube (>6 Miles) Four Track Cut & Cover Tunnel Grade Separations Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) Roadway Crossing HSR - 2 Lane Roadway Under							\$ -			\$	-				\$ -				\$
Four Track Cut & Cover Tunnel Grade Separations Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)																			
Grade Separations Grade Separations Roadway Under 2 Tracks (Urban) ea \$ 13,284,352						0.00	\$ -			0.00 \$	-			0.00	\$ -			1.89	\$ 497,144,242
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban) ea \$ 13,284,352 \$ 19,926,528 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>										1									
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) ea \$ 19,926,528 1 \$ 19,926,528 \$ 19,92			¢ 10 004 0F0				¢								¢				¢
2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)						1	\$ 19 926 528			2 \$	39 853 056				\$ -				\$ \$
3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) ea \$ 2,029,568 \$ - \$ \$ - \$ \$ -										2 \$	- 1,000,000				\$ -				\$
		ea					\$ -			\$	-				\$ -				\$
	4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea				0	\$ -			0 \$	-				\$ -				\$
5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)							\$ -			\$	-				\$ -				\$ \$
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban) ea \$ 2,850,816 \$ - \$ - \$ \$ - \$ \$ 6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped) ea \$ 3,171,328 0 \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$						n	\$ -			0 8	-				\$ -				\$ \$
7 Street Bridging HSR Trench ea \$ 1,398,784 \$ - \$ \$ \$ \$ \$ \$ \$	7 Street Bridging HSR Trench									\$	-			2	\$ 2,797,568			0	\$

COST ELEMENTS	UNIT	UNIT PRICE	Elevated Viaduct (4 tracks)				At-Grade (4 tracks)			Open Trench (4 tracks)				Covered Trench (4 tracks)			
Subsection 7		Base: 2009		В			В			В			В				
(3rd Quarter)		Start: 2025 + 00	End: 2125 + 00	1.89 Mi	iles	Start: 2025 + 00 End: 2125 + 00	1.89 Mile	es	Start: 2025 + 00	End: 2125 + 00	1.89 Mile	es	Start: 2025 + 00	End: 2125 + 00	1.89	Miles	
Subsection Dedtails					Quant.	Cost		Quant.	Cost			Ouant.	Cost			Ouant.	Cost
Double Track At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles	COSI	Start: 0 + 00 End: 0 + 00	0.00 Miles	COSI	Start: 0 + 00	End: 0 + 00	0.00 Miles	COSI	Start: 0 + 00	End: 0 + 00	0.00 Miles	COST
Double Track Elevated (Mile)			Start: 0 + 00	End. 0 1 00	0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 0 + 00	End. 0 1 00	0.00 Miles		Start: 0 + 00	2110. 0 1 00	0.00 Miles	
Double Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00	E 1 040E 00	0.00 Miles		Start: 2025 + 00 End: 2125 + 00	1.89 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Elevated (Mile) Four Track Tunnel (Mile)			Start: 2025 + 00 Start: 0 + 00	End: 2125 + 00	1.89 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 2125 + 00	0.00 Miles 1.89 Miles	
Four Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 2025 + 00	End: 2125 + 00	1.89 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
8 Minor Crossing Closures	ea	\$ 87,040	Start. 0 1 00		1 \$	87,040	Start. 0 + 00	1 \$	87,040		E11a. 2120 1 00	1 \$	87,040		End. 0 1 00	0.00 111103	\$ -
Building Items																	
1 Intermediate Passenger Stations	Each	\$ -			\$	-		\$	-			1 \$	-			1	-
2 Terminal Passenger Stations	Each	\$ - ¢1E 000 000			\$	15 000 000		\$	1F 000 000			\$	-				-
Caltrain Passenger Station - At-Grade Caltrain Passenger Station - On Structure	Each Each	\$15,000,000 \$15,000,000			1 5	15,000,000		1 5	15,000,000			\$	-				
Caltrain Passenger Station - In Tunnel or Subway	Each	\$15,000,000			\$	-		\$	-			0 \$	-			1	\$ 15,000,000
Caltrain Passenger Station - In Trench	Each	\$15,000,000			\$	_		Š	-			1 \$	15,000,000			0	\$ 15,000,000
3 Maintenance Facility	Each	\$ -			\$	_		\$	-			\$	-				\$ -
4 Parking - Structures	space	\$ -			\$	-		\$	-			\$	-				\$ -
5 Parking - At Grade	space	\$ -			\$	-		\$	-			\$	-		1		\$ -
															1		
Rail & Utility Relocation]],										1		
1 Single Track Relocation (Temporary)	Mile Mile	\$ 2,000,896 \$ 2,000,896			\$	-		\$	-			\$	-		1		\$ -
2 Single Track Relocation (Permanent) 3 Single Track Removal	Mile	\$ 2,000,896 \$ 130,048			\$	-		\$	-			\$	-				
4 Major Utility Relocations - Dense Urban	Mile	\$ 1,548,288			\$	-		\$	-			\$	-				\$ -
5 Major Utility Relocations - Urban	Mile	\$ 1,084,416			\$	_		Š	-			\$	_				\$ -
6 Major Utility Relocations - Dense Suburban	Mile	\$ 775,168			\$	-		\$	-			\$	-				\$ -
7 Major Utility Relocations - Suburban	Mile	\$ 464,896			\$	-		\$	-			\$	-				\$ -
8 Major Utility Relocations - Undeveloped	Mile	\$ 30,720			\$	-		\$	-			\$	-				\$ -
ROW (Not Included)																	
ROW required for each segment		A 0.70/ 004															Φ.
1 Dense Urban 2 Urban	Acre	\$ 2,786,321 \$ 1,371,510			\$	-		\$	-			\$	-				-
3 Dense Suburban	Acre Acre	\$ 1,371,510			\$	-		3	-			\$	-				- •
4 Suburban	Acre	\$ 208,418			\$	-		\$	-			\$	-				\$ -
5 Undeveloped	Acre	\$ 3,642			\$			\$	-			\$	-				\$ -
ROW required for Temp. Construction Easement	Acre	,															
1 Dense Urban	Acre				\$	-											
2 Urban	Acre				\$	-											
3 Dense Suburban	Acre				\$	-											
4 Suburban	Acre				\$	-											
5 Undeveloped Right-of-Way Required for Stations, Maintenance & Parking Facilities	Acre				\$	-											
6 Dense Urban	Acre	\$ 2,786,321			\$			\$				\$					\$.
7 Urban	Acre	\$ 1,371,510			\$			\$				\$					\$ -
8 Dense Suburban	Acre				\$			\$				\$					\$ -
9 Suburban	Acre	\$ 208,418			\$			\$	-			\$	-				\$ -
10 Undeveloped	Acre	\$ 3,642			\$	-		\$				\$					\$ -
Environmental Mitigation = 3% Line Costs					\$	4,707,564		\$	1,973,930			\$	6,971,039		1		\$ 17,415,395
Custom Floments]							1		
System Elements	Mile	¢ 2.070.000			1 00 #	2 020 455		1 00 6	3,920,455			1 00 #	2 020 455		1	1 00	¢ 2,020,4EF
1 Signaling (ATC) 2 Communications (w/ Fiber Optic Backbone)	Mile	\$ 2,070,000 \$ 540,000			1.89 \$ 1.89 \$	3,920,455 1,022,727		1.89 \$ 1.89 \$	3,920,455 1,022,727			1.89 \$ 1.89 \$	3,920,455 1,022,727		1	1.89 1.89	
3 Wayside Protection System	Mile	\$ 108,000			1.89 \$			1.89 \$	204,545			1.89 \$	204,545		1	1.89	
					,	20.7010			20.,010				20.,010		1	,	20.,010
Electrification Items															1		
1 Traction Power supply	Mile	\$ 1,170,000			1.89 \$			1.89 \$	2,215,909			1.89 \$	2,215,909		1	1.89	
2 Traction Power Distribution	Mile	\$ 1,485,000	ļ		1.89 \$	2,812,500		1.89 \$	2,812,500			1.89 \$	2,812,500		<u> </u>	1.89	
	Subtotal				\$	171,802,490		\$	77,947,723			\$	249,515,134		1		\$ 608,104,693
Program Implementation Costs (per screening)					\$	43,809,635			19,876,669			\$	63,626,359		1		\$ 155,066,697
Program Implementation Costs															1		
Contingencies (per screening) (25%)					\$	42,950,622		\$	19,486,931			\$	62,378,784		1		\$ 152,026,173
2 2 you do so commy, (2070)						.2,700,022		"	. , , 100, , 01				32,010,104		1		
Subtotal					\$	258,562,747	<u>'</u>	\$	117,311,324		•	\$	375,520,277		•		\$ 915,197,563
Subtotal (Rounded)						259.000.000	-		117.000.000				376.000.000				\$ 915,000,000

 Subtotal (Rounded)
 \$ 259,000,000
 \$ 117,000,000
 \$ 376,000,000
 \$ 915,000,000

COST ELEMENTS	UNIT	UNIT PRICE		At-Grade	(4 tracks)			Open Tren	nch (4 tracks)		Covered Trench			
Subsection 7	Base: 2009		Start: 2125 + 00	C art: 2125 + 00 End: 2184 + 00 1.12 Mi		Miles	Start: 2125 + 00	C			Start: 2125 + 00	End: 2184 + 00	C 1.12 Mile	lS.
`		(3rd Quarter)	Junt. 2120 ± 00) EIIU: 2184 + 00			Start. 2120 ± 00	E110: 2184 + 00	1.12	1.12 Miles		Ena: 2184 + 00	1.12 WIIIe	<u>22</u>
Subsection Dedtails			01 1 2 25	F 1.0 00	Quant.	Cost	01 1 0 7	E 10 00	Quant.	Cost	01 1 2 25	E 1.0.00	Quant.	Cost
Double Track At-Grade (Mile) Double Track Elevated (Mile)			Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	-	Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	
Double Track Lievateu (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)				End: 2184 + 00	1.12 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Elevated (Mile) Four Track Tunnel (Mile)			Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 2125 + 00	End: 2184 + 00	0.00 Miles 1.12 Miles	
Four Track Transe (Mile)			Start: 0 + 00		0.00 Miles		Start: 2125 + 00	End: 2184 + 00	1.12 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Section - Total														
1 Double Track Section - At Grade	Mile	\$ 2,100,224			0.00		-		0.00				0.00 \$	-
2 Double Track Section - On Structure 3 Double Track Section - In Tunnel or Subway	Mile Mile	\$ 4,700,160 \$ 4,700,160			0.00 0.00		-		0.00 0.00				0.00 \$	
4 Double Track Section - In Turner of Subway	Mile	\$ 4,700,160			0.00		-		0.00				0.00 \$	
						,								
Four Track Section - Total														
Four-track Section - At Grade Four-Track Section - On Structure	Mile Mile	\$ 4,200,448 \$ 9,400,320			1.12 0.00		,682		0.00 0.00				0.00 \$ 0.00 \$	
Four-Track Section - In Tunnel or Subway	Mile	\$ 9,400,320			0.00	\$	-		0.00				1.12 \$	10,504,145
Four-Track Section - In Trench	Mile	\$ 9,400,320			0	\$	-		1.12				0.00 \$	
Single Track - Total 5 Single Track Section - At Grade	Mile	\$ 1,549,312			^	e			0	¢			0 \$	
6 Single Track Section - At Grade	Mile	\$ 1,549,312			0	\$	-		0				0 \$	-
7 Single Track Section - In Tunnel or Subway	Mile	\$ 2,350,080			0	\$	-		0	\$ -			0 \$	
8 Single Track Section - In Trench	Mile	\$ 2,350,080			0	\$	-		0	\$ -			0 \$	-
0 Freight Double Track At Crade	Milo	¢ 2020 EE2			0	•			0	¢			0 ¢	
9 Freight Double Track - At Grade 10 Freight Single Track - At Grade	Mile Mile	\$ 2,839,552 \$ 1,549,312			0	\$	-		0				0 \$	-
		., .,,			O	`								
Earthwork Items														
1 Site Preparation - Undeveloped 2 Total Cut	Acre CY	\$ 9,216 \$ 6.45			0.00	\$	-		14.90 961481.48				14.90 \$ 961481.48 \$	137,309 6,202,709
2 Total Cut 3 Total Fill	CY	\$ 6.45			0	\$	-		961481.48				480740.74 \$	3,023,821
4 Borrow	CY	\$ 12.58			0.00	\$	-		0.00				0.00 \$	J,UZJ,UZ I -
5 Spoil	CY	\$ 12.58			0.00		-		961481.48	\$ 12,095,283			480740.74 \$	6,047,642
6 Landscape erosion Control	Acre	\$ 6,144			0.00		-		14.90				0.00 \$	-
7 Security Fencing (Both sides of ROW) 8 Special Drainage Facilities	Mile 5% Eart	\$ 144,384			1.12		,338 ,067		1.12	\$ 161,338 \$ 934,409			0.00 \$	770,574
orapecial Drainage Lacilities	J/O Edil	I IVVOI K				φ 8,	,007			ψ 734,409				110,314
Structures, Tunnels, Walls														
1 Standard Structure (2 tracks)	Mile	\$ 34,972,672				\$	-		0.00	\$ -			0.00 Miles \$	-
Standard Structure (4 tracks) 2 High Structure	Mile Mile	\$ 52,459,008 \$ 40,424,448			0.00	s	_		0.00	\$ -			0.00 Miles	_
3 Long Span Structure	Mile	\$ 61,919,232				\$	-			\$ -			\$	-
4 Waterway Crossing - Primary	Mile	\$ 85,342,208				\$	-			\$ -			\$	-
5 Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$ 92,049,408				\$	-			-			0.00 \$	-
6 Twin Single Track Drill&Blast (<6 Miles) 7 Twin Single Track TBM (<6 Miles)	Mile Mile	\$ 142,731,264 \$ 106,637,312				\$	-			\$ - \$ -			\$	-
8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$ 176,720,896				\$	-			\$ -			\$	-
9 Double Track Drill & Blast	Mile	\$ 146,887,680			0	\$	-		0.00	\$ -			0 \$	-
10 Double Track Mined (Soft Soil)	Mile	\$ 79,200,000				\$	-			\$ -			\$	-
Double Track TBM (<6 Miles) Double Track TBM w/3rd Tube (>6 Miles)	Mile Mile	\$ 106,637,312 \$ 176,720,896				\$	-							
11 Seismic Chamber (Drill & Blast/Mined)	ea	\$ 176,720,890				\$	-			\$ -			\$	-
12 Crossovers	ea	\$ 442,368				\$	-			\$ -			\$	-
13 Cut & Cover Double Track Tunnel	Mile	\$ 131,246,080			0.00.44	\$	-		0.00				0 \$	-
14 Trench Long (2 tracks) (1000 ft+) Trench Long (4 tracks) (1000 ft+)	Mile Mile	\$ 57,524,224 \$ 86,286,336			0.00 Miles 0.00 Miles	٥	-		0.00 1.12		1		0.00 \$ 0.00	-
15 Trench Short (2 tracks) (<1000 ft)	Mile	\$ 78,843,904			o.oo wiiica	\$	-		1.12	\$ -			\$	-
Trench Short (4 tracks) (<1000 ft)	Mile	\$ 118,265,856												
16 Mechanical & Electrical for Tunnels	Mile	\$ 11,848,704			0	\$	-		0.00	\$ -	1		1.12 \$	13,240,029
17 Retaining Walls 18 Containment Walls	Mile Mile	\$ 8,613,888 \$ 5,907,456			0	\$	-		0.00 0.00				0.00 \$	-
19 Single Track Cut and Cover Subway	Mile	\$ 131,246,080				\$	-		0.00	\$ -			\$	-
Four Track Drill & Blast	Mile	\$ 293,775,360				\$	-			\$ -			\$	-
Four Track Mined (Soft Soil)	Mile	\$ 158,400,000				\$	-			\$ -			\$	
Four Track TBM (<6 Miles) Four Track TBM w/3rd Tube (>6 Miles)	Mile Mile	\$ 213,274,624 \$ 353,441,792				\$	-							
Four Track Cut & Cover Tunnel	Mile	\$ 262,492,160			0.00	\$	-		0.00	\$ -			1.12 \$	293,315,103
		,			5.00	`			3.30					5,5 .0,100
Grade Separations		1.				.								
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$ 13,284,352				\$	-			-			\$	
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) 2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea ea	\$ 19,926,528 \$ 2,759,680				\$	-			э \$			\$	•
3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$ 2,739,000				\$	-			\$ -			\$	
4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 3,563,520			0	\$	-			\$ -			\$	
5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$ 3,593,216				\$	-			\$ -			\$	
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 2,850,816				\$	-			\$ -			\$	
6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped) 7 Street Bridging HSR Trench	ea ea	\$ 3,171,328 \$ 1,398,784				\$	-		0	\$ - \$ -			0 \$	
/ Direct bridging HSK Trench	l ea	Ιφ 1,378,784		ı		ΙΦ	- [I	ı o	φ -	I	l	I 0 \$	

	UNIT	UNIT PRICE		At-Grade	(4 tracks)			Open Tren	ch (4 tracks)			Covere	d Trench		
Subsection 7		Base: 2009	Start: 2125 + 00	End: 2104 - 00	C 1.12 N	Milos	Start: 2125 + 00	End: 2184 + 00	C 1.12	Milos	Start: 2125 + 00	End: 2184 + 00	C 111	? Miles	
		(3rd Quarter)	Start: 2125 + 00	E110: 2184 + 00	1.12 1	Miles	Start: 2125 + 00	E110: 2184 + 00	1.12	Miles	Start: 2125 + 00	E110: 2184 + 00	1.12	villes	
Subsection Dedtails Double Track At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost	Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost	Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles		Cost
Double Track At-Grade (Mile)			Start: 0 + 00	E110: 0 + 00	0.00 Miles		Start: 0 + 00	E110: 0 + 00	0.00 Miles		Start: 0 + 00	E110: 0 + 00	0.00 Miles		
Double Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Double Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Four Track Construction/Reconstruction At-Grade (Mile) Four Track Elevated (Mile)			Start: 2125 + 00 Start: 0 + 00	End: 2184 + 00 End: 0 + 00	1.12 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		
Four Track Tunnel (Mile)			Start: 0 + 00	Liid. 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 2125 + 00	End: 2184 + 00	1.12 Miles		
Four Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 2125 + 00	End: 2184 + 00	1.12 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
8 Minor Crossing Closures	ea	\$ 87,040				\$ -			0	\$ -			0	\$	-
2 Terminal Passenger Stations Caltrain Passenger Station - At-Grade Caltrain Passenger Station - On Structure Caltrain Passenger Station - In Tunnel or Subway Caltrain Passenger Station - In Trench 3 Maintenance Facility	Each Each Each Each Each Each Each space	\$ - \$15,000,000 \$15,000,000 \$15,000,000 \$15,000,000			0	\$ - \$ - \$ - \$ - \$ - \$ -			0	\$ - \$ - \$ - \$ - \$ - \$ -			0	\$ \$ \$ \$ \$ \$	
y .	space	\$ -				\$ -				\$ -				\$	-
1 Single Track Relocation (Temporary) 2 Single Track Relocation (Permanent) 3 Single Track Removal 4 Major Utility Relocations - Dense Urban 5 Major Utility Relocations - Urban	Mile	\$ 2,000,896 \$ 2,000,896 \$ 130,048 \$ 1,548,288 \$ 1,084,416				\$ - \$ - \$ - \$ - \$ -				\$ - \$ - \$ - \$ -				\$ \$ \$ \$	- - - -
7 Major Utility Relocations - Suburban 8 Major Utility Relocations - Undeveloped ROW (Not Included)	Mile Mile Mile	\$ 775,168 \$ 464,896 \$ 30,720				\$ - \$ - \$ -				\$ - \$ -				\$	- - -
2 Urban A Dense Suburban A Suburban A Suburban A Undeveloped	Acre Acre Acre Acre Acre Acre	\$ 2,786,321 \$ 1,371,510 \$ 908,134 \$ 208,418 \$ 3,642				\$ - \$ - \$ - \$ - \$ -				\$ - \$ - \$ - \$ - \$ -				\$ \$ \$ \$	
1 Dense Urban 2 Urban 3 Dense Suburban 4 Suburban	Acre Acre Acre Acre Acre					\$ - \$ - \$ - \$ - \$ -									
6 Dense Urban 7 Urban 8 Dense Suburban 9 Suburban	Acre Acre Acre Acre Acre	\$ 2,786,321 \$ 1,371,510 \$ 908,134 \$ 208,418 \$ 3,642				\$ - \$ - \$ - \$ - \$ - \$ - \$ -				\$ - \$ - \$ - \$ - \$ 3,796,355				\$ \$ \$ \$	- - - - 9,997,240
2 Communications (w/ Fiber Optic Backbone)	Mile Mile Mile	\$ 2,070,000 \$ 540,000 \$ 108,000			1.12 1.12 1.12	\$ 603,409			1.12 1.12 1.12	\$ 603,409			1.12 1.12 1.12	\$	2,313,068 603,409 120,682
2 Traction Power Distribution Subtotal		\$ 1,170,000 \$ 1,485,000				\$ 1,659,375 \$ 11,012,901			1.12 1.12	\$ 1,659,375 \$ 136,345,453			1.12 1.12	\$	1,307,386 1,659,375 349,242,493
Program Implementation Costs (per screening) Program Implementation Costs						\$ 2,808,290				\$ 34,768,091				\$	89,056,836
Contingencies (per screening) (25%)						\$ 2,753,225				\$ 34,086,363				\$	87,310,623
Subtotal (Rounded)						\$ 16,574,415 \$ 17,000,000				\$ 205,199,907 \$ 205,000,000					525,609,952 26,000,000

 Subtotal (Rounded)
 \$ 205,000,000

 \$ 205,000,000
 \$ 526,000,000

Second Column	COST ELEMENTS	UNIT	UNIT PRICE		Elevated Via	duct (4 tracks)			At-Grade	e (4 tracks)			Open Tren	ch (4 tracks)			Covered Tre	nch (4 tracks)	
Company Comp	ubsection 7		Base: 2009	C11 04C; 5-	F., 10070 07	D	411	C11 040: 5	F., 1 0070 07	D		Circl 040: 55	F4 0070 07	D	A A SI	Ct 040 : 55	E-4 0070 00	D	411
No. Property Company				Start: 2184 + 00	End: 2270 + 00	1.63 N	/illes	Start: 2184 + 00	End: 2270 + 00	1.63 Mile	es .	Start: 2184 + 00	End: 2270 + 00	1.63	Miles	Start: 2184 + 00	End: 2270 + 00	1.63 N	viiles
See Transport of the Control of the			•	Ctart. 0 00	End: 0 00		Cost	Ctart. 0 00	End: 0 00		Cost	Ctart. 0 00	End: 0 00		Cost	Ctort: 0 00	End: 0 00		Cost
THE CASE OF THE CA	, ,				End: 0 + 00				End: 0 + 00				End: 0 + 00				End: 0 + 00		
The Land Control State Service (1982) The Control State Service (1982) T	ouble Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
The Secretarial Market Secretaria Market					End: 2270 - 00				End: 2270 - 00										
Part Part													End: 0 + 00				End: 0 + 00		
Description Control	our Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			End: 0 + 00	0.00 Miles			End: 2270 + 00		
Market Profession - Organization Market 2 0000000000000000000000000000000000		1	1	Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 2184 + 00	End: 2270 + 00	1.63 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Allows resident of shadors of shadors (1994) Allows resident of shadors (1994) Allow		Mile	\$ 2.100.224			0.00	\$ -			0.00 \$	-			0.00	\$ -			0 5	\$
April 1985 Control of the Contro	2 Double Track Section - On Structure	Mile	\$ 4,700,160			0.00	\$ -			0.00 \$	-			0.00	\$ -			0	\$
Part Part											-							0 5	\$
See New Post of Control Control	4 Double Track Section - In Trench	Iville	\$ 4,700,100			0.00	5 -			0.00 \$	-			0.00	5 -			U :	\$
Tax First Science State Science State Science State Science State Science State Science State Science State Science State Science State Science State Science State Science State Science State Science State Science Sc																			
Face State (1995) (1995										1.63 \$	6,841,639								
Section Control Cont										0 \$	-							1.63	\$ \$ 15,311,12
Simple Transform Algorithms May 2,14472	,									0 \$	-								
Simple Transform Algorithms May 2,14472	Cingle Treel, Total																		
Compress Compress		Mile	\$ 1.549.312			n	\$ -			0 \$	-			n	\$ -			، ا	\$
Surgis From Services As From Prince No.	6 Single Track Section - On structure	Mile	\$ 2,350,080		1	o o	\$ -		1	0 \$	-			0	\$ -			o s	\$
Comparison						0	\$ -			0 \$	-			0	\$ -			0 5	\$
10	ојзније ттаск зесноп - нт ттепсп	iviile	\$ 2,350,080			0	-			0 \$	-			0	> -				Þ
Emergence interest content						0	\$ -			0 \$	-			0	\$ -			0 :	\$
Sin Propriest - Indendes person 9716 9716 914 946 100 5 7727 77316 77.75 7716 97.75 7716 97.75 7716 97.75 97		Mile	\$ 1,549,312			0	\$ -			0 \$	-			0	\$ -			0 :	\$
Sin Propriest - Indendes person 9716 9716 914 946 100 5 7727 77316 77.75 7716 97.75 7716 97.75 7716 97.75 97	Earthwork Items																		
Second Color Col	1 Site Preparation - Undeveloped					15.40	\$ 141,964				-								
Section Car						0	-				-								
Second							*				-								
Company consider Control Company	5 Spoil	CY	\$ 12.58			0.00	\$ -			0.00 \$	-			700740.74	\$ 8,815,206			700740.74	\$ 8,815,20
\$ Special Disrupter Parties Students Stu	·				1	0.00	\$ -		1		005 17:								
Structures, furnish, Walls			\$ 144,384 thwork			0.47				1.63 \$				1.63				0.00	\$ \$ 1,346,41!
Standard Structure (Flancisc)		o.o Euro					. 10,010				.1,707				. 570,227				,510,11
Sampa Standard Standard (* Packs) Mile \$ 0.024 Mi		Mila	¢ 3/1070 470			0.00	¢			0.00				0.00	¢			0.00	•
2 Flejs Studiuse					1				1		-				φ -				Ψ
Al Madeinery Crossing - Primary Nile \$ 8,242,248 \$ 9	2 High Structure	Mile	\$ 40,424,448				\$ -			\$	-				\$ -				\$
Someway Crossing Secondary (Implanter Carrol) Mile South Sou							\$ -			\$	-				\$ -				\$
Fluent Single Track Fluence (Confiles)						0.02	\$ 1,743,360			0.01 \$	871,680				\$ -				\$ \$
Non-ping Track TBM w/307 Tube (-6 Miles)	6 Twin Single Track Drill&Blast (<6 Miles)		\$ 142,731,264				\$ -			\$	-				\$ -				\$
Double Frack Miles State							\$ -			\$	-				\$ -				\$
10 Double Track Mines (Stoff) Mile \$ \$ \$ \$ \$ \$ \$ \$ \$							*			0 \$	-				Ψ			0.00	\$ \$
Double Track TBM w/3rd Tube (-6 Miles)	O Double Track Mined (Soft Soil)	Mile	\$ 174,231,030				-			\$	-				\$ -				\$
11 Sessinic Chamber (Drill & Blast/Mined)					1				1	\$	-								
12 Circs Serviers ea \$ 44.248 \$ 5 \$ 0.00 \$ 0.00 \$ 0.					1		\$ -		1	\$ \$	-				\$ -				\$
14 Terch Long (2 Tacks) (1000 fts)	2 Crossovers	ea	\$ 442,368				*			\$	-				\$ -				\$
Trench Long (4 tracks) (1000 ft)						0.00	\$ - \$			0 \$	-			0.00	\$ -				
15 Trench Short (2 Iracks) (<-1000 ft)		Mile	\$ 86,286,336				-				-			1.63	\$ 140,542,138			0.00	Ψ
16 Mechanical & Electrical for Tunnels Mile S 11,848,704 0.00 \$ - 1.63 \$ 1.63 \$ 1.7 Retaining Walls 0.00 \$ - 1.63 \$ 1.63 \$ 1.7 Retaining Walls 0.00 \$ - 1.63 \$ 1.63 \$ 1.7 Retaining Walls 0.00 \$ - 1.63 \$ 1.	Trench Short (2 tracks) (<1000 ft)	Mile	\$ 78,843,904				\$ -			\$	-				\$ -				\$
17 Retaining Walls 18 Containment Walls 19 Single Track Cut and Cover Subway Four Track Drill & Blast Four Track Mined (Soft Soil) Four Track BM (% of Miles) Four Track RBM (% of Miles) Four Track Cut and Cover Tunnel Four Track Cut & Four Track Cut & Four Tunnel Four Track Cut & Four Tunnel Four Track Cut & Four Tunnel Four Track Cut & Four Tunnel Four Track Cut			\$ 118,265,856 \$ 11.848.704			0.00	\$ -			0 6	-			0.00	\$ -			1 63	\$ 19,299,02
18 Containment Walls 19 Single Track Cut and Cover Subway Mile \$ 5,907,456 19 Single Track Cut and Cover Subway Mile \$ 131,246,080 \$ \$ - Four Track Mile (Soft Soil) Mile \$ 348,462,059 Mile \$ 213,274,624 Four Track TBM (soft Miles) Four Track TBM (soft Miles) Mile \$ 213,274,624 Four Track Cut & Cover Tunnel Mile \$ 262,492,160 Mile \$ 262,492,160 Mile \$ 13,284,352 Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) ea \$ 1,284,352 Broadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) ea \$ 1,9926,528 S - S - S - S - S - S - S - S										0 \$	-			0.00	\$ -				
Four Track Drill & Blast	8 Containment Walls	Mile	\$ 5,907,456							\$	-								\$
Four Track Mined (Soft Soil) Four Track TBM (<6 Miles) Four Track TBM (<6 Miles) Four Track TBM w/3rd Tube (>6 Miles) Four Track TBM w/3rd Tube (>6 Miles) Four Track Cut & Cover Tunnel Mile \$ 213,274,624 Mile \$ 353,441,792 Mile \$ 262,492,160 O.00 \$ - O.0					1		\$ -		1	\$	-				\$ -				\$
Four Track TBM (<6 Miles) Four Track TBM w/3rd Tube (>6 Miles) Four Track TBM w/3rd Tube (>6 Miles) Four Track Cut & Cover Tunnel Grade Separations 1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) ea \$ 13,284,352 Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) ea \$ 19,926,528 Total Cut & Cover Tunnel S					1		\$ -		1	\$	-				\$ -				\$
Four Track Cut & Cover Tunnel Grade Separations Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) ea \$ 13,284,352 Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) ea \$ 19,926,528 for the four Track Cut & Cover Tunnel 0.00 \$ -	Four Track TBM (<6 Miles)	Mile	\$ 213,274,624							\$	-							[
Grade Separations Grade Separations Fig. 2 Grade Separations Fig. 2 Fig.						0.00	¢			0.00	-			0.00	¢			1 42 1	¢ /27 E// 0//
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban) ea \$ 13,284,352 \$ - \$ - \$ \$ - \$ \$ 39,853,056 \$ - \$ \$ 39,853,056 \$ - \$ \$ - \$ \$ 39,853,056 \$ \$ - \$ \$ 39,853,056 \$ \$ - \$ \$ 39,853,056 \$ \$ - \$ \$ 39,853,056	FOUR TRACK CUL & COVER TURNER	iville	⇒ ∠0∠,49∠,160			0.00	-			0.00 \$	-			0.00	> -			1.63	a 421,544,04
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) ea \$ 19,926,528 0 \$ \$ \$ 39,853,056 \$ \$ -																			
							\$ -			\$	- 20.052.057				\$ -				\$
2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) ea \$ 2,759,680 \$ - \$ \$ -	Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)				1	0	\$ - \$		1	2 \$	39,853,056				\$ -				\$
Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) ea \$ 2,737,000 \$ \$ - \$ \$ \$							\$ -			\$	-				\$ -				\$
4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban) ea \$ 3,563,520 0 \$ 0 \$	4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 3,563,520		1	0	\$ -		1	0 \$	-				\$ -				\$
5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)					1		*		1	\$	-				\$ -				\$
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urdan)					1		•		1	\$ \$	-				\$ -				\$
7 Street Bridging HSR Trench ea \$ 1,398,784 \$ - \$ \$ \$ \$ \$ \$ \$ \$	7 Street Bridging HSR Trench				1				1	\$	-			2	\$ 2,797,568				\$

COST ELEMENTS	UNIT	UNIT PRICE		Elevated Via	duct (4 tracks)			At-Grade	(4 tracks)			Open Tren	ch (4 tracks)			Covered Tre	nch (4 tracks)	
Subsection 7		Base: 2009			D)				D				D	
			Start: 2184 + 00	End: 2270 + 00	1.63 N	Miles	Start: 2184 + 00	End: 2270 + 00	1.63 N	Miles	Start: 2184 + 00	End: 2270 + 00	1.63 Mi	les	Start: 2184 + 00	End: 2270 + 00	1.63	Miles
Subsection Dedtails					Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	
Double Track Tunnel (Mile) Double Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00	+	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 2245 + 00	End: 2270 + 00				End: 2270 + 00	1.63 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Elevated (Mile)			Start: 2184 + 00	End: 2245 + 00	1.16 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 2184 + 00	End: 2270 + 00	1.63 Miles	
Four Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 2184 + 00	End: 2270 + 00	1.63 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
8 Minor Crossing Closures	ea	\$ 87,040				-			(-			\$	-				\$ -
Duilding Harry																		
Building Items 1 Intermediate Passenger Stations	Each	¢				1							¢					¢
2 Terminal Passenger Stations	Each	\$				• - t				-			\$	-				\$
Caltrain Passenger Station - At-Grade	Each	\$15,000,000				, - \$ -			1 3	15,000,000			\$	-				\$ -
Caltrain Passenger Station - On Structure	Each	\$15,000,000			0	-				-			\$	-				\$ -
Caltrain Passenger Station - In Tunnel or Subway	Each	\$15,000,000				-				-			\$	-			1	\$ 15,000,000
Caltrain Passenger Station - In Trench	Each	\$15,000,000	(-			5	-			1 \$	15,000,000				\$ -
3 Maintenance Facility	Each	\$ -	1			-				-			\$	-				-
4 Parking - Structures	space		1			-				-			\$	-				\$ -
5 Parking - At Grade	space	\$ -				-			1	-			\$	-				> -
Rail & Utility Relocation																		
1 Single Track Relocation (Temporary)	Mile	\$ 2,000,896	.1										\$	_				\$ -
2 Single Track Relocation (Permanent)	Mile	\$ 2,000,896				-				-			\$	-				\$ -
3 Single Track Removal	Mile	\$ 130,048				-				-			\$	-				\$ -
4 Major Utility Relocations - Dense Urban	Mile	\$ 1,548,288				-			9	-			\$	-				\$ -
5 Major Utility Relocations - Urban	Mile	\$ 1,084,416				-			(-			\$	-				\$ -
6 Major Utility Relocations - Dense Suburban	Mile	\$ 775,168				-			9	-			\$	-				-
7 Major Utility Relocations - Suburban	Mile	\$ 464,896				-				-			\$	-				-
8 Major Utility Relocations - Undeveloped	Mile	\$ 30,720				-			(-			\$	-				\$ -
ROW (Not Included)																		
ROW (Not included) ROW required for each segment																		
1 Dense Urban	Acre	\$ 2,786,321				\$ -							\$	-				\$ -
2 Urban	Acre	\$ 1,371,510				-				-			\$					\$ -
3 Dense Suburban	Acre	\$ 908,134				-				-			\$	-				\$ -
4 Suburban	Acre	\$ 208,418				-				-			\$	-				\$ -
5 Undeveloped	Acre	\$ 3,642				-				-			\$	-				\$ -
ROW required for Temp. Construction Easement	Acre									-			\$	-				
1 Dense Urban	Acre					5 -				-			\$	-				
2 Urban 3 Dense Suburban	Acre Acre					- t				-			\$	-				
4 Suburban	Acre					p - t _				, - }			\$	-				
5 Undeveloped	Acre					-							\$	_				
Right-of-Way Required for Stations, Maintenance & Parking Facilities													\$	-				
6 Dense Urban	Acre	\$ 2,786,321				-				-			\$	-				\$ -
7 Urban	Acre	\$ 1,371,510				-				-			\$					\$ -
8 Dense Suburban	Acre	\$ 908,134				-				-			\$	-				\$ -
9 Suburban	Acre	\$ 208,418				-				-			\$	-				\$ -
10 Undeveloped Environmental Mitigation = 3% Line Costs	Acre	\$ 3,642				2,262,580				1,884,399			\$	5,647,519				\$ - \$ 15,162,868
Environmental willyauon = 370 Line Custs						_ν ∠,∠υ∠,38U			[1,004,399			3	5,047,519				ψ 13,102,008
System Elements			1															
1 Signaling (ATC)	Mile	\$ 2,070,000			1.63	3,371,591			1.63				1.63 \$	3,371,591			1.63	\$ 3,371,591
2 Communications (w/ Fiber Optic Backbone)	Mile	\$ 540,000			1.63	\$ 879,545			1.63	879,545			1.63 \$	879,545			1.63	\$ 879,545
3 Wayside Protection System	Mile	\$ 108,000			1.63	\$ 175,909			1.63				1.63 \$	175,909			1.63	\$ 175,909
			1															
Electrification Items	ļ,		1				1			4 005 /55	1			4.005.455			- : د	4 4 005 15-
1 Traction Power Supply	Mile Mile	\$ 1,170,000 \$ 1,485,000			1.63 1.63				1.63				1.63 \$ 1.63 \$	1,905,682 2,418,750			1.63 1.63	
2 Traction Power Distribution Subt		» 1,485,000	1		1.63	\$ 2,418,750 \$ 86,433,378	1		1.63	3,449,181 73,449,181	-		1.03 \$	2,418,750	+		1.63	\$ 2,418,750 \$ 529,343,265
Program Implementation Costs (per screening)	otai		1			\$ 22,040,511				18,729,541			\$	51,675,656				\$ 529,343,265 \$ 134,982,532
Program Implementation Costs			1			- 22,070,311			[`	, 10,127,041			"	31,073,030				ψ 10 t, 702,032
- J - · · · · · · · · · · · · · · · · ·			1															
Contingencies (per screening) (25%)			1			\$ 21,608,345				18,362,295			\$	50,662,408				\$ 132,335,816
Subtotal						130,082,234		<u></u>		110,541,017			\$	304,987,693				\$ 796,661,613
Subtotal (Rounded)						\$ 130.000.000				\$ 111.000.000				305.000.000				\$ 797,000,000

Subtotal (Rounded) \$ 130,000,000 \$ 111,000,000 \$ 305,000,000 \$ 797,000,000

	8A (6.4 miles)		8B (0.6	miles)	
Subsection 8	At Grade	Aerial Viaduct (HST Only)	At Grade (HST Only)	Covered Trench/Tunnel (HST Only)	Deep Tunnel (HST Only)
Capital Cost (\$2009 in Millions) does not include ROW	\$125	\$40 (2 tracks)	\$7 (2 tracks)	\$150 (2 tracks)	\$113 (2 tracks)
Acquisition Cost of Permanent ROW	Highest	Medium	Highest	Lowest	Lowest
Notes:	Portions of existing alignment are 4-track. Caltrain Lawrence station.				

	COST ELEMENTS	UNIT	UNIT PRICE			(4 tracks)		
ubsecti	ion 8		Base: 2009	Start. 2270 - 00		4	Milar	
			(3rd Quarter)	Start: 2270 + 00	End: 2610 + 00	6.44	Miles	1
ubsectio	on Dedtails					Quant.		Cost
	rack At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		
	rack Elevated (Mile)			Start: 0 + 00		0.00 Miles		
	rack Tunnel (Mile) rack Trench (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		
	ck Construction/Reconstruction At-Grade (Mile)			Start: 2270 + 00	End: 2610 + 00	6.44 Miles		
	ck Elevated (Mile)			Start: 0 + 00		0.00 Miles		
	ck Tunnel (Mile)			Start: 0 + 00		0.00 Miles		
	ck Trench (Mile)			Start: 0 + 00		0.00 Miles		
	le Track Section - Total	N 431 -	¢ 2.100.224			0.00	Φ.	
	le Track Section - At Grade le Track Section - On Structure	Mile Mile	\$ 2,100,224 \$ 4,700,160			0.00 0.00		
	le Track Section - On Structure	Mile	\$ 4,700,160			0.00		
	le Track Section - In Trench	Mile	\$ 4,700,160			0.00		
	Track Section - Total							07.040
	track Section - At Grade	Mile	\$ 4,200,448			6.44		27,048,3
	Track Section - On Structure Track Section - In Tunnel or Subway	Mile Mile	\$ 9,400,320 \$ 9,400,320			0.00 0.00		
	Track Section - In Trench	Mile	\$ 9,400,320			0.00		
	TIGHT STORM		7,100,020			0.00	*	
	e Track - Total							
	e Track Section - At Grade	Mile	\$ 1,549,312			0	\$	
	e Track Section - On structure	Mile	\$ 2,350,080			0	\$	
	e Track Section - In Tunnel or Subway e Track Section - In Trench	Mile Mile	\$ 2,350,080 \$ 2,350,080			0	\$ \$	
Julyle	C Hack Section - III Helich	wine	ψ <u>∠,</u> υυ,υου			U	Ψ	
Freial	ht Double Track - At Grade	Mile	\$ 2,839,552			0	\$	
	ht Single Track - At Grade	Mile	\$ 1,549,312			0	\$	
	work Items					05.07		704
	Preparation - Undeveloped	Acre	\$ 9,216			85.86		791,2
2 Total 3 Total		CY	\$ 6.45 \$ 6.29			0	\$ \$	
4 Borro		CY	\$ 12.58			0	\$	
5 Spoil		CY	\$ 12.58			0	\$	
6 Lands	scape erosion Control	Acre	\$ 6,144			85.86	\$	527,
	rity Fencing (Both sides of ROW)	Mile	\$ 144,384			0.00		
8 Speci	ial Drainage Facilities	5% Eart	hwork I				\$	65,9
Struc	ctures, Tunnels, Walls							
	lard Structure (2 tracks)	Mile	\$ 34,972,672			0.00 Miles	\$	
	lard Structure (4 tracks)	Mile	\$ 52,459,008			0.00 Miles		
	Structure	Mile	\$ 40,424,448				\$	
	Span Structure	Mile	\$ 61,919,232				\$	
	rway Crossing - Primary rway Crossing - Secondary (Irrigation Canal)	Mile Mile	\$ 85,342,208			0.04	\$	2 404
	Single Track Drill&Blast (<6 Miles)	Mile	\$ 92,049,408 \$ 142,731,264			0.04	\$	3,486,
	Single Track Diliablast (<0 Miles)	Mile	\$ 106,637,312				\$	
	Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$ 176,720,896				\$	
	le Track Drill & Blast	Mile	\$ 146,887,680			0	\$	
	le Track Mined (Soft Soil)	Mile	\$ 79,200,000				\$	
	le Track TBM (<6 Miles)	Mile	\$ 106,637,312					
	le Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 176,720,896				¢	
Cross	nic Chamber (Drill & Blast/Mined)	ea ea	\$ 126,205,952 \$ 442,368				\$	
	Cover Double Track Tunnel	Mile	\$ 131,246,080			0	\$	
	th Long (2 tracks) (1000 ft+)	Mile	\$ 57,524,224			0.00 Miles	\$	
Trenc	ch Long (4 tracks) (1000 ft+)	Mile	\$ 86,286,336			0.00 Miles		
	th Short (2 tracks) (<1000 ft)	Mile	\$ 78,843,904				\$	
	th Short (4 tracks) (<1000 ft)	Mile	\$ 118,265,856				¢	
	anical & Electrical for Tunnels ning Walls	Mile Mile	\$ 11,848,704 \$ 8,613,888			0	\$ \$	
	ning wans ainment Walls	Mile	\$ 5,907,456			U	\$	
	e Track Cut and Cover Subway	Mile	\$ 131,246,080				\$	
Four	Track Drill & Blast	Mile	\$ 293,775,360				\$	
	Track Mined (Soft Soil)	Mile	\$ 158,400,000				\$	
	Track TBM (<6 Miles)	Mile	\$ 213,274,624					
	Track TBM w/3rd Tube (>6 Miles) Track Cut & Cover Tuppel	Mile	\$ 353,441,792				\$	
roul	Track Cut & Cover Tunnel	Mile	\$ 262,492,160				Φ	
Grade	e Separations							
	way Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$ 13,284,352				\$	
	way Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$ 19,926,528				\$	
	way Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$ 2,759,680			0	\$	
	way Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$ 2,029,568				\$	
	way Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 3,563,520				\$	
	way Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$ 3,593,216			0	\$	
K09q/	way Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban) way Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea ea	\$ 2,850,816 \$ 3,171,328			0	\$ \$	
6 Roads								

COST ELEMENTS	UNIT	UNIT PRICE	At-Grad	de (4 tracks)	
Subsection 8		Base: 2009		Α	
		(3rd Quarter)	Start: 2270 + 00 End: 2610 + 00	6.44	Miles
Subsection Dedtails				Quant.	Cost
Double Track At-Grade (Mile)			Start: 0 + 00 End: 0 + 00	0.00 Miles	0031
Double Track Elevated (Mile)			Start: 0 + 00	0.00 Miles	
Double Track Tunnel (Mile)			Start: 0 + 00	0.00 Miles	
Double Track Trench (Mile)			Start: 0 + 00	0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 2270 + 00 End: 2610 + 00		
Four Track Elevated (Mile)			Start: 0 + 00	0.00 Miles 0.00 Miles	
Four Track Tunnel (Mile) Four Track Trench (Mile)			Start: 0 + 00 Start: 0 + 00	0.00 Miles	
8 Minor Crossing Closures	ea	\$ 87,040	Start. 0 + 00		\$ -
- Chimida di Godan de	04	0.70.10			*
Building Items					
1 Intermediate Passenger Stations	Each	\$ -			\$ -
2 Terminal Passenger Stations	Each	\$ -			\$ -
Caltrain Passenger Station - At-Grade	Each	\$15,000,000			\$ 15,000,000
Caltrain Passenger Station - On Structure	Each	\$15,000,000			\$ -
Caltrain Passenger Station - In Tunnel or Subway Caltrain Passenger Station - In Trench	Each	\$15,000,000			\$ - \$ -
3 Maintenance Facility	Each Each	\$15,000,000 \$ 123,924,884			\$ - \$
4 Parking - Structures	space	\$ 123,924,004			\$ -
5 Parking - At Grade	space	\$ -			\$ -
Rail & Utility Relocation					
1 Single Track Relocation (Temporary)	Mile	\$ 2,000,896			\$ -
2 Single Track Relocation (Permanent)	Mile	\$ 2,000,896			\$ -
3 Single Track Removal	Mile	\$ 130,048			\$ -
4 Major Utility Relocations - Dense Urban	Mile	\$ 1,548,288			\$ -
5 Major Utility Relocations - Urban 6 Major Utility Relocations - Dense Suburban	Mile Mile	\$ 1,084,416 \$ 775,168			\$ - \$ -
7 Major Utility Relocations - Dense Suburban	Mile	\$ 775,168 \$ 464,896			\$ - \$
8 Major Utility Relocations - Undeveloped	Mile	\$ 404,870			\$ -
Simple Ching Relocations Chaeveloped	TVIIIC	ψ 50,720			Ψ
ROW (Not Included)					
ROW required for each segment					
1 Dense Urban	Acre	\$ 2,786,321			\$ -
2 Urban	Acre	\$ 1,371,510			\$ -
3 Dense Suburban	Acre	\$ 908,134			\$ -
4 Suburban	Acre	\$ 208,418			\$ -
5 Undeveloped ROW required for Temp. Construction Easement	Acre	\$ 3,642			\$ -
1 Dense Urban	Acre				\$ -
2 Urban	Acre				\$ -
3 Dense Suburban	Acre				\$ -
4 Suburban	Acre				\$ -
5 Undeveloped	Acre				\$ -
Right-of-Way Required for Stations, Maintenance & Parking Facilities					
6 Dense Urban	Acre	\$ 2,786,321			\$ -
7 Urban	Acre	\$ 1,371,510			-
8 Dense Suburban	Acre	\$ 908,134			\$ -
9 Suburban 10 Undeveloped	Acre Acre	\$ 208,418 \$ 3,642			\$ -
Environmental Mitigation = 3% Line Costs	Acre	φ 3,042			\$ - \$ 1,407,594
					Ψ 1,4U1,U74
System Elements					
1 Signaling (ATC)	Mile	\$ 2,070,000		6.44	\$ 13,329,545
2 Communications (w/ Fiber Optic Backbone)	Mile	\$ 540,000		6.44	\$ 3,477,273
3 Wayside Protection System	Mile	\$ 108,000		6.44	\$ 695,455
Electrification Items	N 4:1	e 1470.000		, l	¢ 7504001
1 Traction Power supply	Mile	\$ 1,170,000		6.44	
2 Traction Power Distribution Subtotal	Mile	\$ 1,485,000			\$ 9,562,500 \$ 82,926,244
Program Implementation Costs (per screening)					\$ 82,926,244 \$ 21,146,192
Program Implementation Costs (per screening)					¥ 21,17U,17Z
1					
Contingencies (per screening) (25%)					\$ 20,731,561
Subtotal					\$ 124,803,997
Subtotal (Rounded)				J.	\$ 125,000,000

Subtotal (Rounded) \$ 125,000,000

COST ELEMENTS	UNIT	UNIT PRICE	El·	evated Viaduct (2	2 tracks) (HST onl	ly)		At-Grade (2 tracks)	(HST only)		Co	overed Trench (2	tracks) (HST on	nly)		Tunnel (2 trad	cks) (HST only)	
Subsection 8		Base: 2009 (3rd	t	Ì	3			В	**			Ì	В				В	
		Quarter)	Start: 2610 + 00	End: 2640 + 00	0.57 N	Miles	Start: 2610 + 00	End: 2640 + 00	0.57 Mil	es	Start: 2610 + 00	End: 2640 + 00	0.57	Miles	Start: 2610 + 00	End: 2640 + 00	0.57 N	Miles
Subsection Dedtails		I	+		Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles	·	Start: 2610 + 00		0.57 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)			Start: 2610 + 00	End: 2640 + 00	0.57 Miles	' 	Start: 0 + 00		0.00 Miles		Start: 0 + 00	Fnd: 2640 + 00	0.00 Miles 0.57 Miles		Start: 0 + 00	F1 2/40 00	0.00 Miles	
Double Track Tunnel (Mile) Double Track Trench (Mile)			Start: 0 + 00 Start: 0 + 00	 	0.00 Miles 0.00 Miles	, I	Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 2610 + 00 Start: 0 + 00	E110: 2040 + 00	0.57 Miles		Start: 2610 + 00 Start: 0 + 00	End: 2640 + 00	0.57 Miles 0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Elevated (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles	, 1	Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles	, 1	Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Trench (Mile)	1		Start: 0 + 00	 '	0.00 Miles	<u>'</u>	Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Section - Total Double Track Section - At Grade	Mile	\$ 2,100,224	,	<u>'</u>	0.00	l ¢			0.57 \$	1,193,309			0	¢			0.00	¢
2 Double Track Section - On Structure	Mile	\$ 4,700,160		<u>'</u>	0.57				0.00 \$	1,193,309			0	\$ -			0.00	
3 Double Track Section - In Tunnel or Subway	Mile	\$ 4,700,160		1	0.00	\$ 2,070,010	, -		0.00 \$	-			0.57 Miles	\$ 2,670,545			0.57	\$ 2,670,545
4 Double Track Section - In Trench	Mile	\$ 4,700,160	i	<u>'</u>	0.00	\$,		\$	-			0	\$ -			0.00	\$ -
				<u>'</u>	1	, I												
Four Track Section - Total Four-track Section - At Grade	Mile	\$ 4,200,448	,	1	0.00	l ¢	, -		0 \$				0.00	¢			0.00	¢
Four-Track Section - On Structure	Mile	\$ 9,400,320		1	0.00		, -		0 \$	-			0.00				0.00	
Four-Track Section - In Tunnel or Subway	Mile	\$ 9,400,320		<u> </u>	0.00		, -		0.00 \$	-			0.00				0.00	\$ -
Four-Track Section - In Trench	Mile	\$ 9,400,320	,	<u>'</u>	0.00	\$ -			\$	-			0.00				0.00	
				'	1	, I	,											
Single Track - Total 5 Single Track Section - At Grade	Mile	\$ 1,549,312	,	1	1	! ¢			0				_	4				•
6 Single Track Section - At Grade 6 Single Track Section - On structure	Mile	\$ 1,549,312 \$ 2,350,080		'	0	- ا - ا			0 \$	-			0	\$			0	\$ -
7 Single Track Section - In Tunnel or Subway	Mile	\$ 2,350,080		'	0	\$ -			0 \$	- 1			0	\$ -				\$ -
8 Single Track Section - In Trench	Mile	\$ 2,350,080		'	0	\$ -	,		\$	-			0	\$ -			0	\$ -
O Freight Davids Treels At C. J		A 0.000 555		1	1	1			0				=				1	*
9 Freight Double Track - At Grade 10 Freight Single Track - At Grade	Mile Mile	\$ 2,839,552 \$ 1,549,312		1	0	> -!			0 \$	-			0	\$ -			0 5	\$ -
TOT TOIST SITISTE TRACK - AL GIAGE	iville	φ 1,54 7 ,512		1	١				U \$	-			U	-			"	Ψ -
Earthwork Items				<u>'</u>	1	, I												
1 Site Preparation - Undeveloped	Acre	\$ 9,216	ı	<u> </u>	7.58	\$ 69,818	, -		7.58 \$	69,818			0.00				0.00	\$ -
2 Total Cut	CY	\$ 6.45		<u> </u>	0.00	\$ -	, -		0.00 \$	-			611111.11				0.00	\$ -
3 Total Fill	CY	\$ 6.29		<u> </u>	1	\$ -1	, -		\$	-			366666.67				0.00	\$ -
4 Borrow 5 Spoil	CY	\$ 12.58 \$ 12.58		<u> </u>	1	\$ - I	, -		3	-			0.00 244444.44				0.00 5	\$ -
6 Landscape erosion Control	Acre	\$ 6,144		1	7.58	\$ 46,545	, -		7.58 \$	46,545			0.00				0.00	\$ -
7 Security Fencing (Both sides of ROW)	Mile	\$ 144,384		<u>'</u>	0.00	\$ -			0.00 \$	-			0.00				0.00	
8 Special Drainage Facilities	5% Eart	thwork		<u>'</u>	1	\$ 5,818	,		\$	5,818				\$ 466,189			[]	\$ -
Christian Times I Wells				<u>'</u>	1	, I	,											
Structures, Tunnels, Walls 1 Standard Structure (2 tracks)	Mile	\$ 34,972,672	,	<u>'</u>	0.57	\$ 19,870,836			0.00 Miles \$	_			0.00	\$ -			0.00 Miles	\$ -
Standard Structure (4 tracks)	Mile	\$ 52,459,008		<u>'</u>	0.00	17,070,030			0.00 Miles				0.00	Ψ			0.00 Miles	Ψ
2 High Structure	Mile	\$ 40,424,448		<u>'</u>	1	\$ -			\$	-				\$ -			(\$ -
3 Long Span Structure	Mile	\$ 61,919,232		1	1	\$, -		\$	-				\$ -			['	\$ -
4 Waterway Crossing - Primary	Mile	\$ 85,342,208		1	1	\$ -!	, -		\$	-				-				\$ -
5 Waterway Crossing - Secondary (Irrigation Canal) 6 Twin Single Track Drill&Blast (<6 Miles)	Mile Mile	\$ 92,049,408 \$ 142,731,264		1	1	\$ -1	, -		\$	-				-				\$ -
7 Twin Single Track Diliablast (<0 Miles)	Mile	\$ 106,637,312	,	1	1	- j \$ -	, -		\$	-				\$ -				\$ -
8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$ 176,720,896		1	1	\$ -	, -		\$	-				\$ -				\$ -
9 Double Track Drill & Blast	Mile	\$ 146,887,680)	1	0.00	\$, -		0.00 \$	-			0.00	\$ -			0.00	\$ -
10 Double Track Mined (Soft Soil)	Mile	\$ 79,200,000		1	1	\$ -	, -		\$	-				\$ -			9.57.4	\$ -
Double Track TBM (<6 Miles) Double Track TBM w/3rd Tube (>6 Miles)	Mile Mile	\$ 106,637,312 \$ 176,720,896		1	1	, I	, -										0.57 Miles	\$ 60,589,382
11 Seismic Chamber (Drill & Blast/Mined)	ea	\$ 126,205,952		1	1	is -	, -		\$	_				\$ -				\$ -
12 Crossovers	ea	\$ 442,368	3	1	1	\$ -			\$	-				\$ -			[]	\$ -
13 Cut & Cover Double Track Tunnel	Mile	\$ 131,246,080		'	1	\$ -	,		\$	-			0.57				[[[\$ -
14 Trench Long (2 tracks) (1000 ft+)	Mile	\$ 57,524,224		'	0.00	\$ -	,		0.00 \$	-			0.00				0.00 \$	\$ -
Trench Long (4 tracks) (1000 ft+) 15 Trench Short (2 tracks) (<1000 ft)	Mile Mile	\$ 86,286,336 \$ 78,843,904		'	0.00	! ! \$,		0.00				0.00	\$			0.00	¢
Trench Short (4 tracks) (<1000 ft)	Mile	\$ 118,265,856		'	1	- <u>- </u>	,		1,3	-				_			[]	Ψ -
16 Mechanical & Electrical for Tunnels	Mile	\$ 11,848,704	1	'	0.00		,		\$	-			0.57				0.57	
17 Retaining Walls	Mile	\$ 8,613,888		'	0.00	\$ -	,		0.00 \$	-			0.00				0.00	
18 Containment Walls	Mile	\$ 5,907,456		'	1	\$ -	,		\$	-				\$ -			[[[\$ -
19 Single Track Cut and Cover Subway Four Track Drill & Blast	Mile Mile	\$ 131,246,080 \$ 293,775,360		'	1	ֆ -! ¢	,		\$	-				\$ -				\$ -
Four Track Drill & Biast Four Track Mined (Soft Soil)	Mile	\$ 293,775,360 \$ 158,400,000		'	1	- \$ -	,		\$	-				\$ -			0.00 Miles	\$ -
Four Track TBM (<6 Miles)	Mile	\$ 213,274,624	1	'	1	· ,	,		ľ								0	\$ -
Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 353,441,792	2	'	1	, I	,										[\$ -
Four Track Cut & Cover Tunnel	Mile	\$ 262,492,160	I.	'	0.00	\$ -	,		\$	-			0.00	\$ -			0.00	\$ -
Grade Separations				1	1	,	,											
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$ 13,284,352	,	'	1	! !\$ -	,		•					s -				\$ - I
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$ 19,926,528	3	'	1	\$ -	,		\$	- 1				\$ -			[]	\$ -
2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$ 2,759,680)	'	1	\$ -			0 \$	-				\$ -			[]	\$ -
3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$ 2,029,568		'	1	\$ -			\$	-				-			[[\$ -
4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 3,563,520		'	1	\$ -!	,		\$	-				\$ -			[[[\$ -
5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$ 3,593,216		'	1	ֆ -! ¢	,		0 8	-				\$ -				\$ -
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	69													Ψ -		•		
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban) 6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea ea	\$ 2,850,816 \$ 3,171,328		ļ	! !	\$ -1	' i		\$	-				\$ -				\$ - I

COST ELEMENTS	UNIT	UNIT PRICE	El	evated Viaduct (2	tracks) (HST on	ly)		At-Grade (2 trac	ks) (HST only)		Covered Trer	ch (2 tracks) (HST o	nly)		Tunnel (2 trad	cks) (HST only)	
Subsection 8		Base: 2009 (3rd		E	3			В				В				В	
		Quarter)	Start: 2610 + 00	End: 2640 + 00	0.571	Miles	Start: 2610 + 00	End: 2640 + 00	0.57 [Miles	Start: 2610 + 00 End: 2640 +	00 0.5	7 Miles	Start: 2610 + 00	End: 2640 + 00	0.57	Miles
		Qual (ci)															
Subsection Dedtails			0	F 1 0 00	Quant.	Cost	01 1 0110 00	E 1 0/10 00	Quant.	Cost	0	Quant.	Cost	0	F 1 0 00	Quant.	Cost
Double Track At-Grade (Mile) Double Track Elevated (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles 0.57 Miles		Start: 2610 + 00 Start: 0 + 00	End: 2640 + 00	0.57 Miles 0.00 Miles		Start: 0 + 00 End: 0 + 0	0 0.00 Miles 0.00 Miles	4	Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	
Double Track Elevated (Mile) Double Track Tunnel (Mile)			Start: 2610 + 00	End: 2640 + 00	0.57 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles		Start: 0 + 00 Start: 2610 + 00 End: 2640 -	0.00 Miles 00 0.57 Miles	4	Start: 0 + 00 Start: 2610 + 00	End: 2640 + 00	0.00 Miles 0.57 Miles	
Double Track Turiner (wile) Double Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles	1	Start: 0 + 00	E110. 2040 + 00	0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Elevated (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00 End: 0 + 0		1	Start: 0 + 00		0.00 Miles	
Four Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00 End: 0 + 0		1	Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00 End: 0 + 0	0 0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
8 Minor Crossing Closures	ea	\$ 87,040				\$ -				\$ -			\$ -				\$ -
Building Items																	
1 Intermediate Passenger Stations	Each					\$ -				\$ -			\$ -				\$ -
2 Terminal Passenger Stations	Each					\$ -				\$ -			\$ -				-
Caltrain Passenger Station - At-Grade	Each	\$15,000,000 \$15,000,000				\$ -				\$ -			\$ -				\$ -
Caltrain Passenger Station - On Structure Caltrain Passenger Station - In Tunnel or Subway	Each Each	\$15,000,000				\$ -				\$ -			\$ -				\$ -
Calirain Passenger Station - In Turnier of Subway Caltrain Passenger Station - In Trench	Each	\$15,000,000				\$ - ¢				\$ -		'	-				\$ -
3 Maintenance Facility	Each	\$ 123,924,884								\$ -			\$ -				\$ -
4 Parking - Structures						\$ - ¢				\$ -			\$ -				5 -
5 Parking - Structures	space space					\$ - ¢				•			\$ -				\$ -
5 Faiking - At Grade	space	-				.				-			•				
Rail & Utility Relocation																	
1 Single Track Relocation (Temporary)	Mile	\$ 2,000,896				¢				¢ .			•				\$
2 Single Track Relocation (Permanent)	Mile	\$ 2,000,896				\$ -				\$			\$				\$
3 Single Track Removal	Mile	\$ 130,048				\$ -				\$ -			\$ -				\$ -
4 Major Utility Relocations - Dense Urban	Mile	\$ 1,548,288				\$ -				\$ -			\$ -				\$ -
5 Major Utility Relocations - Urban	Mile	\$ 1,084,416				\$ -				\$ -			\$ -				\$ -
6 Major Utility Relocations - Dense Suburban	Mile	\$ 775,168				\$ -				\$ -			\$ -				\$ -
7 Major Utility Relocations - Suburban	Mile	\$ 464,896				\$ -				\$ -			\$ -				\$ -
8 Major Utility Relocations - Undeveloped	Mile	\$ 30,720				\$ -				\$ -			\$ -				\$ -
ROW (Not Included)																	
ROW required for each segment																	
1 Dense Urban	Acre	\$ 2,786,321				\$ -				\$ -			\$ -				\$ -
2 Urban	Acre	\$ 1,371,510				\$ -				\$ -			\$ -				-
3 Dense Suburban	Acre	\$ 908,134				\$ -				-			\$ -				\$ -
4 Suburban	Acre	\$ 208,418				\$ -				\$ -			\$ -				-
5 Undeveloped	Acre	\$ 3,642				\$ -				\$ -			\$ -				-
ROW required for Temp. Construction Easement																	
1 Dense Urban	Acre					\$ -				-							-
2 Urban	Acre					\$ -				-							-
3 Dense Suburban	Acre					\$ -				-							-
4 Suburban	Acre					\$ -				-							-
5 Undeveloped Right-of-Way Required for Stations, Maintenance & Parking Facilities	Acre					\$ -				-							\$ -
6 Dense Urban	Aoro	¢ 2.70/ 221				¢				¢			¢				¢
7 Urban	Acre Acre	\$ 2,786,321 \$ 1,371,510				\$ -				\$ -			\$ -				\$ -
8 Dense Suburban	Acre	\$ 908,134				•				•			\$ -				\$ -
9 Suburban	Acre	\$ 208,418				•				\$ -			9				•
10 Undeveloped	Acre	\$ 3,642				\$ -				\$			\$ -				\$
Environmental Mitigation = 3% Line Costs	71010	0,012				\$ 679,907				\$ 39,465			\$ 2,812,931				\$ 2,099,764
Environmental Williagation = 570 Eine 5555						ψ 0/7,707				Ψ 07,100			Ψ 2,012,701				Ψ 2,077,701
System Elements				1													
1 Signaling (ATC)	Mile	\$ 2,070,000		1	0.57	\$ 1,176,136			0.57	\$ 1,176,136		0.5	1,176,136			0.57	\$ 1,176,136
2 Communications (w/ Fiber Optic Backbone)	Mile	\$ 540,000			0.57				0.57			0.5	\$ 306,818			0.57	
3 Wayside Protection System	Mile	\$ 108,000			0.57				0.57			0.5	\$ 61,364			0.57	\$ 61,364
				1													
Electrification Items				1													
1 Traction Power supply	Mile	\$ 1,170,000		1	0.57				0.57			0.5	\$ 664,773			0.57	
2 Traction Power Distribution	Mile	\$ 1,485,000			0.57	\$ 843,750			0.57	\$ 843,750		0.5	\$ 843,750			0.57	\$ 843,750
Subt	otal			1		\$ 26,396,311				\$ 4,407,797			\$ 99,630,137				\$ 75,144,751
Program Implementation Costs (per screening)				1		\$ 6,731,059				\$ 1,123,988			\$ 25,405,685				\$ 19,161,911
Program Implementation Costs				1													
l lo u l versi				1													4 40
Contingencies (per screening) (25%)						\$ 6,599,078				\$ 1,101,949			\$ 24,907,534				\$ 18,786,188
		<u> </u>	I	l									1.				
Subtotal						\$ 39,726,449				\$ 6,633,734			\$ 149,943,356				\$ 113,092,850
Subtotal (Pounded)						¢ 40 000 000				\$ 7,000,000			¢ 150 000 000				¢ 112 000 000

 Subtotal (Rounded)
 \$ 7,000,000
 \$ 150,000,000
 \$ 113,000,000

		9(a)A (2	.3 miles)		9(a)B (0.9 miles)
Subsection 9(a)	Aerial Viaduct (HST Only)	At Grade (HST Only)	Covered Trench/Tunnel (HST Only)	Deep Tunnel (HST Only)	Aerial Viaduct (HST Only)
Capital Cost (\$2009 in Millions) does not include ROW	\$160 (2 tracks)	\$54 (2 tracks)	\$594 (2 tracks)	\$484 (2 tracks)	\$248 (2 tracks)
Acquisition Cost of Permanent ROW	Medium	Highest	Lowest	Lowest	Medium
Notes:		1. Caltrain Santa Clara station reconstructed to allow for 2 HST tracks. 2. Convert Hedding St to an underpass.	Caltrain Santa Clara station reconstructed to allow for 2 HST tracks.		1. HST San Jose station.

	UNIT UNIT	RICE	Elevated viaduct	(2 tracks) (HST on	ly)		At-Grade (2 tra	cks) (HST only)		C	overed Trench (2 tracks) (HST only)			Tunnel (2 tra	acks) (HST only)	
Subsection 9 (a)	Base	2009		Α				A				A				Α	
	(3rd Q		00 End: 2760 + 00	2.27 N	Miles	Start: 2640 + 00	End: 2760 + 00	2.27 Miles		Start: 2640 + 00	End: 2760 + 00	2.27 Mile	es	Start: 2640 + 00	End: 2760 + 00	2.27	Miles
Cubacation Dadtaila	(, ,	,		Quant	Cost			Quant	Coot			Quant	Coot			Quant	Cost
Subsection Dedtails Double Track At-Grade (Mile)		Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost	Start: 2640 + 00	End: 2760 + 00	Quant. 2.27 Miles	Cost	Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost	Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	COSI
Double Track At Grade (Mile)			00 End: 2760 + 00			Start: 0 + 00	E11d. 2700 1 00	0.00 Miles		Start: 0 + 00	Elia. 0 1 00	0.00 Miles		Start: 0 + 00	End. 0 + 00	0.00 Miles	
Double Track Tunnel (Mile)		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 2640 + 00	End: 2760 + 00	2.27 Miles		Start: 2640 + 00	End: 2760 + 00	2.27 Miles	
Double Track Trench (Mile)		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Elevated (Mile)		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Tunnel (Mile)		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Trench (Mile) Double Track Section - Total	1 1	Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
1 Double Track Section - 10tal 1 Double Track Section - At Grade	Mile \$ 2,	00,224		0	¢			2.27 \$	4,773,236			0.00 \$				0.00	\$
2 Double Track Section - On Structure		00,160		2.27	\$ 10,682,182			0.00 \$				0.00 \$	-			0.00	
3 Double Track Section - In Tunnel or Subway		00,160		0	\$ -			0.00 \$	-			2.27 \$	10,682,182			2.27	\$ 10,682,18
4 Double Track Section - In Trench		00,160		0	\$ -			0.00 \$	-			0.00 \$	-			0.00	
Four Track Section - Total												0.00					
Four-track Section - At Grade		00,448		0.00				0.00 \$	-			0.00 \$	-			0.00	
Four-Track Section - On Structure		00,320 00,320		0.00 0.00				0.00 \$ 0.00 \$	-			0.00 \$ 0.00 \$	-			0.00	
Four-Track Section - In Tunnel or Subway Four-Track Section - In Trench		00,320		0.00				0.00 \$	-			0.00 \$	-			0.00	
Four-Track Section - In Trench	IVIIIe \$ 9,4	00,320		0.00	> -			0.00 \$	-			0.00 \$	-			0.00	\$
Single Track - Total			1														
5 Single Track Section - At Grade	Mile \$ 1,	49,312	1	n	\$ -	1		0 \$	-			0 \$	-			n	\$
6 Single Track Section - On structure		50,080	1	0	\$ -	1		0 \$	-			0 \$	-			0	\$
7 Single Track Section - In Tunnel or Subway	Mile \$ 2,3	50,080	1	0	\$ -	1		0 \$	-			0 \$	-			0	\$
8 Single Track Section - In Trench		50,080	1	0	\$ -			0 \$	-			0 \$	-			0	\$
			1														
9 Freight Double Track - At Grade		39,552	1	0	\$ -			0 \$	-			0 \$	-			0	\$
10 Freight Single Track - At Grade	Mile \$ 1,!	49,312	1	0	•			0 \$	-			0 \$	-			0	Þ
Earthwork Items																	
1 Site Preparation - Undeveloped	Acre \$	9,216		17.91	\$ 165,025			17.91 \$	165,025			17.91 \$	165,025			0.00	\$
2 Total Cut	CY \$	6.45		0.00				0.00 \$	-			1155555.56 \$	7,454,720			977777.78	\$ 6,307,84
3 Total Fill	CY \$	6.29		0.00				0.00 \$	-			577777.78 \$	3,634,176			0.00	\$
4 Borrow	CY \$	12.58		0.00				0.00 \$	-			0.00 \$	-			0.00	\$
5 Spoil	CY \$	12.58		0.00	\$ -			0.00 \$	-			577777.78 \$	7,268,352			977777.78	\$ 12,300,28
6 Landscape erosion Control	Acre \$	6,144		0.00	\$ -			0.00 \$	-			0.00 \$	-			0.00	\$
7 Security Fencing (Both sides of ROW)		44,384		0.00				0.00 \$	-			0.00 \$	-			0.00	
8 Special Drainage Facilities	5% Earthwork				\$ 8,251			\$	8,251			\$	926,114				\$ 930,40
C																	
Structures, Tunnels, Walls 1 Standard Structure (2 tracks)	Mile \$ 34,9	70 (70		2 27	\$ 79,483,345			0.00 ¢				0.00 Miles \$				0.00 Miles	¢
Standard Structure (2 tracks)		59,008		2.27 0.00	\$ 79,483,345			0.00 \$	-			0.00 Miles \$	-			0.00 Miles	\$
2 High Structure	Mile \$ 52,4			0.00	¢			0.00				0.00 Miles				0.00 Miles	¢
3 Long Span Structure		19,232			Ф			\$	-			3	-				\$
4 Waterway Crossing - Primary		42,208			\$ -			\$	_			\$	_				\$
5 Waterway Crossing - Secondary (Irrigation Canal)		49,408		0.01	\$ 871,680			\$				0.01 \$	697,344			0.01	\$ 697,34
6 Twin Single Track Drill&Blast (<6 Miles)	Mile \$ 142,				\$ -			\$	-			\$	-				\$
7 Twin Single Track TBM (<6 Miles)	Mile \$ 106,6				\$ -			\$	-			\$	-				\$
8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile \$ 176,				\$ -			\$	-			\$	-				\$
9 Double Track Drill & Blast	Mile \$ 146,8			0.00	\$ -			0.00 \$	-			\$	-				\$
10 Double Track Mined (Soft Soil)	Mile \$ 79,2	00,000			\$ -			\$	-			\$	-			0.00	\$
Double Track TBM (<6 Miles)	Mile \$ 106,6		1			1]				2.27	\$ 242,357,52
Double Track TBM w/3rd Tube (>6 Miles)	Mile \$ 176,		1			1]					\$
11 Seismic Chamber (Drill & Blast/Mined)	ea \$ 126,2		1		\$ -	1		\$	-			\$	-				\$
12 Crossovers	ea \$		1	0.00	\$ -	1		\$	-			\$	200 204 515				\$
13 Cut & Cover Double Track Tunnel	Mile \$ 131,2		1	0.00		1		0.00 \$	-			2.27 \$	298,286,545			0.00	\$
14 Trench Long (2 tracks) (1000 ft+) Trench Long (4 tracks) (1000 ft+)	Mile \$ 57,! Mile \$ 86, 2	24,224 86 336	1	0.00 0.00	-			0.00 \$ 0.00	-			0.00 \$ 0.00	-			0.00 0.00	Þ
15 Trench Short (2 tracks) (<1000 ft)	Mile \$ 86,2		1	0.00	\$			0.00				0.00				0.00	\$
Trench Short (4 tracks) (<1000 ft)	Mile \$ 118,		1		Ψ -			•	-				-				*
16 Mechanical & Electrical for Tunnels	Mile \$ 11,8		1	0.00	\$ -			0.00 \$	-			2.27 \$	26,928,873			2.27	\$ 26,928,87
17 Retaining Walls		13,888	1	0.00				0.00 \$	-			0.00 \$	-51,20,010			0.00	
18 Containment Walls	Mile \$ 5,9		1	3.55	\$ -	1		\$	-			\$	-			3.30	\$
19 Single Track Cut and Cover Subway	Mile \$ 131,2		1		\$ -	1		\$	-			\$	-				\$
Four Track Drill & Blast	Mile \$ 293,	75,360	1		\$ -	1		\$	-			\$	-				\$
Four Track Mined (Soft Soil)	Mile \$ 158,4		1		\$ -	1		\$	-			\$	-			0.00	
Four Track TBM (<6 Miles)	Mile \$ 213,2		1			1										0.00	\$
Four Track TBM w/3rd Tube (>6 Miles)	Mile \$ 353,4		1														\$
Four Track Cut & Cover Tunnel	Mile \$ 262,	92,160	1	0.00	\$ -			0.00 \$	-			0.00 \$	-			0.00	\$
Grade Separations			1														
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea \$ 13,2	84,352	1		\$	1		•				¢					\$
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea \$ 19,9		1		\$	1		,	-			0	-				Š
2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Guburban)		59,680	1		\$ -	1		1 \$	2,759,680								\$
3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)		29,568	1		\$ -	1		"\$	-1.07,000			s	-				\$
4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)		63,520	1		\$ -	1		0 \$	-			0 \$	-			0	\$
5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)		93,216	1		\$ -	1		\$	-			\$	-				\$
		50,816	1		\$ -	1		\$	-			\$	-				\$
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	Cα φ 2,0		•				i .	. 1 '		1		i 1.		Ī	Ī	1	l .
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban) 6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)		71,328			\$ -			\$	-			\$	-				\$

COST ELEMENTS	UNIT	UNIT PRICE	E	levated Viaduct (2 tracks) (HST only)	A	At-Grade (2 tracks) (F	HST only)		(overed Trench (2 tracks) (HST on	ly)		Tunnel (2 tra	cks) (HST only)	
Subsection 9 (a)	·	Base: 2009		А			Α					A				Α	
		(3rd Quarter)	Start: 2640 + 00	End: 2760 + 00	2.27 Miles	Start: 2640 + 00 E	End: 2760 + 00	2.27 Mil	les	Start: 2640 + 00	End: 2760 + 00	2.27	Miles	Start: 2640 + 00	End: 2760 + 00	2.27	Miles
		(Srd Qddrtcr)															
Subsection Dedtails				Quan				Quant.	Cost			Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile)			Start: 0 + 00	End: 0 + 00 0.00 M				27 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile) Double Track Tunnel (Mile)			Start: 2640 + 00 Start: 0 + 00	End: 2760 + 00 2.27 Mi 0.00 Mi		Start: 0 + 00 Start: 0 + 00		00 Miles 00 Miles		Start: 0 + 00 Start: 2640 + 00	Fnd: 2760 + 00	0.00 Miles 2.27 Miles		Start: 0 + 00 Start: 2640 + 00	Fnd: 2760 + 00	0.00 Miles 2.27 Miles	
Double Track Turner (Wile)			Start: 0 + 00	0.00 M		Start: 0 + 00		00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	E110. 2700 + 00	0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00	0.00 M		Start: 0 + 00		00 Miles		Start: 0 + 00	Elia. 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Elevated (Mile)			Start: 0 + 00	End: 0 + 00 0.00 Mi		Start: 0 + 00		00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	1
Four Track Tunnel (Mile)			Start: 0 + 00	0.00 M		Start: 0 + 00		00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Trench (Mile)			Start: 0 + 00	0.00 M	les	Start: 0 + 00	0.0	00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
8 Minor Crossing Closures	ea	\$ 87,040			\$			\$	-				\$ -				\$ -
Building Items	F	¢.											•				
Intermediate Passenger Stations Terminal Passenger Stations	Each Each	\$ -			\$	•		\$	-				\$ -				-
Caltrain Passenger Stations - At-Grade	Each	\$15,000,000			\$			1 8	15,000,000				•				•
Caltrain Passenger Station - On Structure	Each	\$15,000,000			0 \$			11 \$	13,000,000				\$ -				\$ -
Caltrain Passenger Station - In Tunnel or Subway	Each	\$15,000,000			\$			\$	_			1	\$ 15,000,000				\$ -
Caltrain Passenger Station - In Trench	Each	\$15,000,000			\$			\$	-				\$ -			0	\$ -
3 Maintenance Facility	Each	\$ 123,921,884			\$			\$	-				\$ -				\$ -
4 Parking - Structures	space	\$ -			\$			\$	-				\$ -				\$ -
5 Parking - At Grade	space	\$ -			\$			\$	-				\$ -				\$ -
Rail & Utility Relocation																	
1 Single Track Relocation (Temporary) 2 Single Track Relocation (Permanent)	Mile Mile	\$ 2,000,896 \$ 2,000,896			\$	•		\$	-				\$ -				-
3 Single Track Renoval	Mile	\$ 2,000,896			\$			\$	-				•				\$ -
4 Major Utility Relocations - Dense Urban	Mile	\$ 1,548,288			\$			\$	_				\$ -				\$ -
5 Major Utility Relocations - Urban	Mile	\$ 1,084,416			\$			Š	_				\$ -				\$ -
6 Major Utility Relocations - Dense Suburban	Mile	\$ 775,168			\$			\$	_				\$ -				\$ -
7 Major Utility Relocations - Suburban	Mile	\$ 464,896			\$			\$	-				\$ -				\$ -
8 Major Utility Relocations - Undeveloped	Mile	\$ 30,720			\$			\$	-				\$ -				\$ -
ROW (Not Included)																	
ROW required for each segment		A 0.70/ 004			A			•					•				•
1 Dense Urban 2 Urban	Acre Acre	\$ 2,786,321 \$ 1,371,510			\$	•		\$	-				-				
3 Dense Suburban	Acre	\$ 908,134			\$			\$	-				•				•
4 Suburban	Acre	\$ 208,418			\$			Š	_				\$ -				\$ -
5 Undeveloped	Acre	\$ 3,642			\$			\$	_				\$ -				\$ -
ROW required for Temp. Construction Easement																	
1 Dense Urban	Acre				\$			\$	-				\$ -				\$ -
2 Urban	Acre				\$			\$	-				\$ -				\$ -
3 Dense Suburban	Acre				\$			\$	-				\$ -				\$ -
4 Suburban	Acre				\$	•		\$	-				\$ -				-
5 Undeveloped Right-of-Way Required for Stations, Maintenance & Parking Facilities	Acre				\$	1		\$	-				\$ -				\$ -
6 Dense Urban	Acre	\$ 2,786,321			•								¢				¢
7 Urban		\$ 1,371,510			\$			\$	-				\$ -				\$ -
8 Dense Suburban		\$ 908,134			Š.			Š	_				\$ -				\$ -
9 Suburban	Acre	\$ 208,418			\$			\$	_				\$ -				\$ -
10 Undeveloped	Acre	\$ 3,642			\$			\$	-				\$ -				\$ -
Environmental Mitigation = 3% Line Costs					\$ 2,736,314			\$	681,186				\$ 11,131,300				\$ 9,006,134
System Elements		A 0.070.00-			2.27 6	. [470			2.5-	A 47015:-				
1 Signaling (ATC)	Mile Mile	\$ 2,070,000 \$ 540,000			2.27 \$ 4,704,545 2.27 \$ 1,227,273			2.27 \$ 2.27 \$				2.27 2.27	\$ 4,704,545 \$ 1,227,273			2.27 2.27	\$ 4,704,545 \$ 1,227,273
2 Communications (w/ Fiber Optic Backbone) 3 Wayside Protection System		\$ 108,000			2.27 \$ 1,227,273			2.27 \$				2.27	\$ 1,227,273 \$ 245,455			2.27	\$ 1,227,273
Si wayside Protection System	Mile	\$ 100,000			2.21 \$ 245,450	' l		2.27 \$	240,400			2.21	\$ 240,400			2.21	\$ 240,400
Electrification Items																	
1 Traction Power supply	Mile	\$ 1,170,000	1		2.27 \$ 2,659,091			2.27 \$	2,659,091			2.27	\$ 2,659,091			2.27	\$ 2,659,091
2 Traction Power Distribution		\$ 1,485,000			2.27 \$ 3,375,000			2.27 \$				2.27	\$ 3,375,000			2.27	
	Subtotal				\$ 106,158,161			\$	35,598,742				\$ 394,385,994				\$ 321,421,958
Program Implementation Costs (per screening)					\$ 27,070,331			\$	9,077,679				\$ 100,568,428				\$ 81,962,599
Program Implementation Costs																	
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1									0.000.40=				A 00 50/ /				
Contingencies (per screening) (25%)					\$ 26,539,540	'		\$	8,899,685				\$ 98,596,498				\$ 80,355,489
Cultural			<u> </u>		h 150 7/5				E0 E37 40:				A FOR 550 05:			<u> </u>	A 400 740 5 ::
Subtotal					\$ 159,768,033				53,576,106				\$ 593,550,921				\$ 483,740,046
Subtotal (Dounded)																	

 Subtotal (Rounded)
 \$ 54,000,000
 \$ 594,000,000
 \$ 484,000,000

COST ELEMENTS Subsection 9 (a)	UNIT	UNIT PRICE		Elevated Viac	luct (2 tracks)		
ubsection 9 (a)		Base: 2009 (3rd Quarter)	Start: 2760 + 00	End: 2808 + 00		Miles	
ubsection Dedtails		(ora gaartor)			Quant		Coot
puble Track At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles		Cost
buble Track Elevated (Mile)			Start: 2760 + 00	End: 2808 + 00	0.91 Miles		
puble Track Elevated (Mile)			Start: 0 + 00	L11u. 2000 + 00	0.00 Miles		
ouble Track Trench (Mile)			Start: 0 + 00		0.00 Miles		
ur Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00		0.00 Miles		
ur Track Elevated (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		
ur Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		
ur Track Trench (Mile)			Start: 0 + 00		0.00 Miles		
Double Track Section - Total							
Double Track Section - At Grade	Mile	\$ 2,100,224			0.00	\$	
Double Track Section - On Structure	Mile	\$ 4,700,160			0.91	\$	4,272,8
Double Track Section - In Tunnel or Subway	Mile	\$ 4,700,160			0.00	\$	
Double Track Section - In Trench	Mile	\$ 4,700,160			0.00	\$	
Four Track Section - Total							
Four-track Section - At Grade	Mile	\$ 4,200,448			0.00		
Four-Track Section - On Structure	Mile	\$ 9,400,320			0.00		
Four-Track Section - In Tunnel or Subway	Mile	\$ 9,400,320			0.00		
Four-Track Section - In Trench	Mile	\$ 9,400,320			0.00	\$	
Single Track - Total							
Single Track Section - At Grade	Mile	\$ 1,549,312			0	\$	
Single Track Section - On structure	Mile	\$ 2,350,080			0	\$	
Single Track Section - In Tunnel or Subway	Mile	\$ 2,350,080			0	\$	
Single Track Section - In Trench	Mile	\$ 2,350,080			0	\$	
Facilità Davida Tarak. At Can l		¢ 0.000 ===				Φ.	
Freight Double Track - At Grade	Mile	\$ 2,839,552			0	\$	
Freight Single Track - At Grade	Mile	\$ 1,549,312			0	\$	
Earthwork Items							
	Acre	\$ 9,216			7.16	¢	66,
Site Preparation - Undeveloped Total Cut	CY				7.10		00,0
					0	\$	
Total Fill Borrow	CY	\$ 6.29			o o	\$	
150.1011	CY	\$ 12.58					
Spoil Landscape erosion Control	Acre	\$ 12.58 \$ 6,144			0.00 0.00		
Security Fencing (Both sides of ROW)	Mile	\$ 144,384			0.00		
Special Drainage Facilities		rthwork			0.00	\$	3,3
Special Dialitage Facilities	370 Edi	I IIIWOIK				Þ	٥,٠
Structures, Tunnels, Walls							
Standard Structure (2 tracks)	Mile	\$ 34,972,672			0.91	\$	31,793,
Standard Structure (4 tracks)	Mile	\$ 52,459,008			0.00		
High Structure	Mile	\$ 40,424,448				\$	
Long Span Structure	Mile	\$ 61,919,232				\$	
Waterway Crossing - Primary	Mile	\$ 85,342,208				\$	
Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$ 92,049,408				\$	
Twin Single Track Drill&Blast (<6 Miles)	Mile	\$ 142,731,264				\$	
Twin Single Track TBM (<6 Miles)	Mile	\$ 106,637,312				\$	
Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$ 176,720,896				\$	
Double Track Drill & Blast	Mile	\$ 146,887,680			0	\$	
Double Track Mined (Soft Soil)	Mile	\$ 79,200,000				\$	
Double Track TBM (<6 Miles)	Mile	\$ 106,637,312					
Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 176,720,896					
Seismic Chamber (Drill & Blast/Mined)	ea	\$ 126,205,952				\$	
Crossovers	ea	\$ 442,368				\$	
Cut & Cover Double Track Tunnel	Mile	\$ 131,246,080			0	\$	
Trench Long (2 tracks) (1000 ft+)	Mile	\$ 57,524,224	1		0.00 Miles	\$	
Trench Long (4 tracks) (1000 ft+)	Mile	\$ 86,286,336			0.00 Miles		
Trench Short (2 tracks) (<1000 ft)	Mile	\$ 78,843,904				\$	
Trench Short (4 tracks) (<1000 ft)	Mile	\$ 118,265,856					
Mechanical & Electrical for Tunnels	Mile	\$ 11,848,704			0	+	
Retaining Walls	Mile	\$ 8,613,888			0	\$	
Containment Walls	Mile	\$ 5,907,456				\$	
Single Track Cut and Cover Subway	Mile	\$ 131,246,080				\$	
Four Track Drill & Blast	Mile	\$ 293,775,360				\$	
Four Track Mined (Soft Soil)	Mile	\$ 158,400,000				\$	
Four Track TBM (<6 Miles)	Mile	\$ 213,274,624					
Four Track Cut % Cover Type I	Mile	\$ 353,441,792			0.00	¢	
Four Track Cut & Cover Tunnel	Mile	\$ 262,492,160			0.00	\$	
Crado Sonarations							
Grade Separations Peadway Cressing HSD 4 Lane Readway Hader 2 Tracks (Urban)		¢ 12.204.252				¢	
Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$ 13,284,352				\$	
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$ 19,926,528				\$	
Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$ 2,759,680				\$	
Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$ 2,029,568				\$	
Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 3,563,520				\$	
Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$ 3,593,216				\$	
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban) 6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped) 7 Street Bridging HSR Trench	ea ea ea	\$ 2,850,816 \$ 3,171,328 \$ 1,398,784				\$ \$ \$	

COST ELEMENTS	UNIT	UNIT PRICE		Elevated Via	duct (2 tracks)		
Subsection 9 (a)		Base: 2009	B				
		(3rd Quarter)	Start: 2760 + 00	End: 2808 + 00	0.91	Miles	5
Subsection Dedtails					Quant.		Cost
Double Track At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		
Double Track Elevated (Mile) Double Track Tunnel (Mile)			Start: 2760 + 00 Start: 0 + 00	End: 2808 + 00	0.91 Miles 0.00 Miles		
Double Track Trench (Mile)			Start: 0 + 00		0.00 Miles		
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00		0.00 Miles		
Four Track Elevated (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		
Four Track Trench (Mile) 8 Minor Crossing Closures	ea	\$ 87,040	Start: 0 + 00		0.00 Miles	\$	
o will of Grossing Glosures	Ca	\$ 07,040				Ψ	-
Building Items							
1 Intermediate Passenger Stations	Each	\$ -				\$	-
Intermediate Passenger Stations (Diridon)	Each	\$ 119,521,386			1	\$	119,521,386
2 Terminal Passenger Stations Caltrain Passenger Station - At-Grade	Each Each	\$ - \$15,000,000				\$ \$	-
Caltrain Passenger Station - On Structure	Each	\$15,000,000			0	\$	-
Caltrain Passenger Station - In Tunnel or Subway	Each	\$15,000,000			ŭ	\$	-
Caltrain Passenger Station - In Trench	Each	\$15,000,000				\$	-
3 Maintenance Facility	Each	\$ 123,921,884				\$	-
4 Parking - Structures	space	\$ -				\$	-
5 Parking - At Grade	space	\$ -				\$	-
Rail & Utility Relocation							
1 Single Track Relocation (Temporary)	Mile	\$ 2,000,896				\$	-
2 Single Track Relocation (Permanent)	Mile	\$ 2,000,896				\$	-
3 Single Track Removal	Mile	\$ 130,048				\$	-
4 Major Utility Relocations - Dense Urban 5 Major Utility Relocations - Urban	Mile Mile	\$ 1,548,288 \$ 1,084,416				\$ \$	-
6 Major Utility Relocations - Dense Suburban	Mile	\$ 775,168				\$	-
7 Major Utility Relocations - Suburban	Mile	\$ 464,896				\$	-
8 Major Utility Relocations - Undeveloped	Mile	\$ 30,720				\$	-
ROW (Not Included)							
ROW required for each segment 1 Dense Urban	Acre	\$ 2,786,321				\$	
2 Urban	Acre	\$ 1,371,510				\$	_
3 Dense Suburban	Acre	\$ 908,134				\$	-
4 Suburban	Acre	\$ 208,418				\$	-
5 Undeveloped	Acre	\$ 3,642				\$	-
ROW required for Temp. Construction Easement 1 Dense Urban	Acre					\$	
2 Urban	Acre					\$	_
3 Dense Suburban	Acre					\$	-
4 Suburban	Acre					\$	-
5 Undeveloped	Acre					\$	-
Right-of-Way Required for Stations, Maintenance & Parking Facilities 6 Dense Urban	Acre	\$ 2,786,321				\$	_
7 Urban	Acre	\$ 1,371,510				\$	
8 Dense Suburban	Acre	\$ 908,134				\$	-
9 Suburban	Acre	\$ 208,418				\$	-
10 Undeveloped	Acre	\$ 3,642				\$	-
Environmental Mitigation = 3% Line Costs						\$	4,669,707
System Elements							
1 Signaling (ATC)	Mile	\$ 2,070,000			0.91	\$	1,881,818
2 Communications (w/ Fiber Optic Backbone)	Mile	\$ 540,000			0.91	\$	490,909
3 Wayside Protection System	Mile	\$ 108,000					
Electrification Items					0.91	\$	
1 Traction Power supply	Mile	\$ 1,170,000			0.91		1,063,636
2 Traction Power Distribution	Mile	\$ 1,485,000	<u> </u>		0.91		1,350,000
Subtotal						\$	165,112,978
Program Implementation Costs (per screening)						\$	42,103,809
Program Implementation Costs							
Contingencies (per screening) (25%)						\$	41,278,245
J							. ,
Subtotal						\$	248,495,032
Subtotal (Rounded)						ф n	48.000.000

Subtotal (Rounded) \$ 248,000,000



	9(b)A (2.3 miles)	9(b)B (0.9 miles)
Subsection 9(b)	Deep Tunnel (HST Only)	Deep Tunnel (HST Only)
Capital Cost (\$2009 in Millions) does not include ROW	\$484 (2 tracks)	\$383 (2 tracks)
Acquisition Cost of Permanent ROW	Lowest	Lowest
Notes:		1. HST San Jose station.

	COST ELEMENTS	UNIT	UNIT PRICE			ks) (HST only)	
Subsection 9	(b)		Base: 2009	Ctt 2/40 00	A		A11
			(3rd Quarter)	Start: 2640 + 00	End: 2760 + 00	2.27 N	Alles
ubsection Dec						Quant.	Cost
	xt-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles	
	Elevated (Mile)			Start: 0 + 00	End: 2740 : 00	0.00 Miles 2.27 Miles	
ouble Track T ouble Track T	• •			Start: 2640 + 00 Start: 0 + 00	End: 2760 + 00	0.00 Miles	
	nstruction/Reconstruction At-Grade (Mile)			Start: 0 + 00		0.00 Miles	
our Track Elev				Start: 0 + 00		0.00 Miles	
ur Track Tun	nnel (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles	
ur Track Tre			ı	Start: 0 + 00	End: 0 + 00	0.00 Miles	
	ck Section - Total	NASI-	¢ 2400224			0.00	φ
	ck Section - At Grade ck Section - On Structure	Mile Mile	\$ 2,100,224 \$ 4,700,160			0.00 0.00	
	ck Section - On Structure	Mile	\$ 4,700,160			2.27	
	ck Section - In Trench	Mile	\$ 4,700,160			0.00	
	Section - Total						
	Section - At Grade	Mile	\$ 4,200,448			0.00	
	Section - On Structure	Mile	\$ 9,400,320 \$ 9,400,320			0.00	
	Section - In Tunnel or Subway Section - In Trench	Mile Mile	\$ 9,400,320 \$ 9,400,320			0.00	
I Uui-IIack	Section - III Trench	IVIIIE	\$ 7,400,320			0.00	Φ
Single Trac	ck - Total						
5 Single Tracl	k Section - At Grade	Mile	\$ 1,549,312			0	\$
Single Track	k Section - On structure	Mile	\$ 2,350,080			0	\$
	k Section - In Tunnel or Subway	Mile	\$ 2,350,080				\$
Single Tracl	k Section - In Trench	Mile	\$ 2,350,080			0	\$
Erolaht Da	hla Track At Crado	NA:La	¢ 2.020 FE2			0	¢
	ble Track - At Grade gle Track - At Grade	Mile Mile	\$ 2,839,552 \$ 1,549,312			ŭ	\$ \$
J. roigin only	go naon ni ordao	IVIIIC	V 1,077,012			3	Ψ.
Earthwork	Items						
1 Site Prepara	ation - Undeveloped	Acre	\$ 9,216			0.00	\$
2 Total Cut		CY	\$ 6.45			977777.78	\$ 6,307,
Total Fill		CY	\$ 6.29			0.00	\$
4 Borrow		CY	\$ 12.58			0.00	
5 Spoil		CY	\$ 12.58			977777.78	
	erosion Control	Acre	\$ 6,144			0.00	
	ncing (Both sides of ROW)	Mile	\$ 144,384			0.00	
s Special Dra	inage Facilities	5% Eart	nwork I				\$ 930,
Structures	, Tunnels, Walls						
	tructure (2 tracks)	Mile	\$ 34,972,672			0.00 Miles	\$
	tructure (4 tracks)	Mile	\$ 52,459,008			0.00 Miles	
2 High Structu		Mile	\$ 40,424,448				\$
3 Long Span		Mile	\$ 61,919,232				\$
	Crossing - Primary	Mile	\$ 85,342,208			0.01	\$
	Crossing - Secondary (Irrigation Canal)	Mile	\$ 92,049,408			0.01	\$ 697,
	Track Drill&Blast (<6 Miles) Track TBM (<6 Miles)	Mile Mile	\$ 142,731,264 \$ 106,637,312				\$ \$
	Track TBM w/3rd Tube (<6 Miles)	Mile	\$ 106,637,312				Ψ \$
	ck Drill & Blast	Mile	\$ 176,720,696				\$ \$
	ck Mined (Soft Soil)	Mile	\$ 79,200,000			0.00	
	ck TBM (<6 Miles)	Mile	\$ 106,637,312			2.27	
	ck TBM w/3rd Tube (>6 Miles)	Mile	\$ 176,720,896				\$
Seismic Cha	amber (Drill & Blast/Mined)	ea	\$ 126,205,952				\$
Crossovers		ea	\$ 442,368				\$
	r Double Track Tunnel	Mile	\$ 131,246,080				\$
	g (2 tracks) (1000 ft+)	Mile	\$ 57,524,224	1		0.00	\$
	g (4 tracks) (1000 ft+)	Mile	\$ 86,286,336 \$ 78,843,004			0.00	¢
	rt (2 tracks) (<1000 ft) rt (4 tracks) (<1000 ft)	Mile Mile	\$ 78,843,904 \$ 118,265,856	1			Φ
	& Electrical for Tunnels	Mile	\$ 11,848,704			2.27	\$ 26,928,
Retaining W		Mile	\$ 8,613,888			0.00	
Containmen		Mile	\$ 5,907,456				\$
Single Track	k Cut and Cover Subway	Mile	\$ 131,246,080				\$
Four Track		Mile	\$ 293,775,360				\$
	Mined (Soft Soil)	Mile	\$ 158,400,000			0.00	
	TBM (<6 Miles)	Mile	\$ 213,274,624			0.00	\$
	TBM w/3rd Tube (>6 Miles)	Mile	\$ 353,441,792			0.00	\$ ¢
roui ITack	Cut & Cover Tunnel	Mile	\$ 262,492,160			0.00	Þ
Grade Sepa	arations						
	rossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$ 13,284,352				\$
	rossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$ 19,926,528				\$
	rossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$ 2,759,680				\$
	rossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$ 2,029,568				\$
	rossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 3,563,520				\$
	rossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$ 3,593,216				\$
	rossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 2,850,816				\$
	rossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$ 3,171,328				\$
	ing HSR Trench	ea	\$ 1,398,784	Î.	1		

COST ELEMENTS	UNIT	UNIT PRICE	1	cks) (HST only)	·)		
Subsection 9(b)		Base: 2009		•	Α		
		(3rd Quarter)	Start: 2640 + 00	End: 2760 + 00	2.27	Miles	
Subsection Dedtails		, ,			Quant.	Cost	
Double Track At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles	0031	
Double Track Elevated (Mile)			Start: 0 + 00		0.00 Miles		
Double Track Tunnel (Mile) Double Track Trench (Mile)			Start: 2640 + 00 Start: 0 + 00	End: 2760 + 00	2.27 Miles 0.00 Miles		
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00		0.00 Miles		
Four Track Elevated (Mile)			Start: 0 + 00		0.00 Miles		
Four Track Tunnel (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Trench (Mile) 8 Minor Crossing Closures	ea	\$ 87,040	Start: 0 + 00	End: 0 + 00	0.00 Miles	\$ -	
o Million Grossing Glosures	Cu	Ψ 07,040				Ψ	
Building Items							
1 Intermediate Passenger Stations 2 Terminal Passenger Stations	Each Each	\$ - \$ -				\$ - \$ -	
Caltrain Passenger Station - At-Grade	Each	\$15,000,000				\$ -	
Caltrain Passenger Station - On Structure	Each	\$15,000,000				\$ -	
Caltrain Passenger Station - In Tunnel or Subway	Each	\$15,000,000				-	
Caltrain Passenger Station - In Trench 3 Maintenance Facility	Each Each	\$15,000,000 \$ 123,921,884			0	\$ - \$ -	
4 Parking - Structures	space	\$ 123,921,004				\$ -	
5 Parking - At Grade	space					\$ -	
Rail & Utility Relocation 1 Single Track Relocation (Temporary)	Mile	\$ 2,000,896				\$ -	
2 Single Track Relocation (Permanent)	Mile	\$ 2,000,896 \$ 2,000,896				\$ -	
3 Single Track Removal	Mile	\$ 130,048				\$ -	
4 Major Utility Relocations - Dense Urban	Mile	\$ 1,548,288				-	
5 Major Utility Relocations - Urban 6 Major Utility Relocations - Dense Suburban	Mile Mile	\$ 1,084,416 \$ 775,168				\$ - \$ -	
7 Major Utility Relocations - Suburban	Mile	\$ 464,896				\$ -	
8 Major Utility Relocations - Undeveloped	Mile	\$ 30,720				\$ -	
DOW (N. H. J. J. A.							
ROW (Not Included) ROW required for each segment							
1 Dense Urban	Acre	\$ 2,786,321				\$ -	
2 Urban	Acre	\$ 1,371,510				\$ -	
3 Dense Suburban	Acre	\$ 908,134				-	
4 Suburban 5 Undeveloped	Acre Acre	\$ 208,418 \$ 3,642				\$ - \$ -	
ROW required for Temp. Construction Easement	71010	Ψ 0,012				•	
1 Dense Urban	Acre					\$ -	
2 Urban 3 Dense Suburban	Acre					\$ - \$ -	
4 Suburban	Acre Acre					\$ -	
5 Undeveloped	Acre					\$ -	
Right-of-Way Required for Stations, Maintenance & Parking Facilities							
6 Dense Urban 7 Urban	Acre	\$ 2,786,321 \$ 1,371,510				\$ -	
8 Dense Suburban	Acre Acre	\$ 1,371,510				\$ -	
9 Suburban	Acre	\$ 208,418				\$ -	
10 Undeveloped	Acre	\$ 3,642				\$ -	
Environmental Mitigation = 3% Line Costs						\$ 9,006,134	
System Elements							
1 Signaling (ATC)	Mile	\$ 2,070,000			2.27		
2 Communications (w/ Fiber Optic Backbone)	Mile	\$ 540,000			2.27		
3 Wayside Protection System	Mile	\$ 108,000			2.27	\$ 245,455	
Electrification Items							
1 Traction Power supply	Mile	\$ 1,170,000			2.27		
2 Traction Power Distribution	Mile	\$ 1,485,000	1	-	2.27		
Subtotal Program Implementation Costs (per screening)						\$ 321,421,958 \$ 81,962,599	
Program Implementation Costs						. 01,702,077	
Contingencies (per screening) (25%)						\$ 80,355,489	
Subtotal			<u> </u>	<u> </u>	1	\$ 483,740,046	
Subtotal (Rounded)						\$ 484,000,000	

Subtotal (Rounded) \$ 484,000,000

	COST ELEMENTS	COST ELEMENTS UNIT UNIT PF				ks) (HST only)		
ubsecti	ion 9(b)		Base: 2009	Ctt 27/0 00	37(0 + 00 End; 2000 + 00		0.93 Miles	
			(3rd Quarter)	Start: 2760 + 00	End: 2809 + 00	0.93	Miles	5
	on Dedtails					Quant.		Cost
	rack At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		
	rack Elevated (Mile)			Start: 0 + 00	End. 2000 : 00	0.00 Miles 0.93 Miles		
	rack Tunnel (Mile) rack Trench (Mile)			Start: 2760 + 00 Start: 0 + 00	End: 2809 + 00	0.93 Miles		
	ck Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00		0.00 Miles		
	ck Elevated (Mile)			Start: 0 + 00		0.00 Miles		
	ck Tunnel (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		
	ck Trench (Mile)		1	Start: 0 + 00	End: 0 + 00	0.00 Miles		
	le Track Section - Total	NASI-	¢ 2400.224			0.00	4	
	le Track Section - At Grade le Track Section - On Structure	Mile Mile	\$ 2,100,224 \$ 4,700,160			0.00 0.00		
	le Track Section - On Structure	Mile	\$ 4,700,160			0.93		4,361,
	le Track Section - In Trench	Mile	\$ 4,700,160			0.00		1,001,
	Track Section - Total							
	track Section - At Grade	Mile	\$ 4,200,448			0.00		
	Track Section - On Structure	Mile	\$ 9,400,320 \$ 9,400,320			0.00	\$	
	Track Section - In Tunnel or Subway Track Section - In Trench	Mile Mile	\$ 9,400,320 \$ 9,400,320			0.00 0.00		
i oui-	Hack Section - III Hench	IVIIIC	\$ 7,400,320			0.00	Ψ	
Single	e Track - Total							
5 Single	e Track Section - At Grade	Mile	\$ 1,549,312			0	\$	
	e Track Section - On structure	Mile	\$ 2,350,080			0	\$	
	e Track Section - In Tunnel or Subway	Mile	\$ 2,350,080			0	\$	
Single	e Track Section - In Trench	Mile	\$ 2,350,080			0	\$	
Freinh	ht Double Track - At Grade	Mile	\$ 2,839,552			0	\$	
	ht Single Track - At Grade	Mile	\$ 1,549,312			0	\$	
9	·					Ĭ		
	nwork Items							
	Preparation - Undeveloped	Acre	\$ 9,216			0.00		
2 Total		CY	\$ 6.45			399259.26		2,575,
Total		CY	\$ 6.29			0.00		
Borro Spoil		CY	\$ 12.58 \$ 12.58			0.00 399259.26		5,022,
	scape erosion Control	Acre	\$ 6,144			0.00		5,022,0
	rity Fencing (Both sides of ROW)	Mile	\$ 144,384			0.00		
8 Speci	ial Drainage Facilities	5% Eart	hwork				\$	379,
٥.								
	tures, Tunnels, Walls lard Structure (2 tracks)	Mile	\$ 34,972,672			0.00 Miles	¢	
	lard Structure (4 tracks)	Mile	\$ 52,459,008			0.00 Miles	Ф	
	Structure	Mile	\$ 40,424,448			0.00 1411103	\$	
	Span Structure	Mile	\$ 61,919,232				\$	
	rway Crossing - Primary	Mile	\$ 85,342,208				\$	
	rway Crossing - Secondary (Irrigation Canal)	Mile	\$ 92,049,408			0.01	\$	697,
	Single Track Drill&Blast (<6 Miles)	Mile	\$ 142,731,264				\$	
	Single Track TBM (<6 Miles)	Mile	\$ 106,637,312				\$	
	Single Track TBM w/3rd Tube (<6 Miles) le Track Drill & Blast	Mile Mile	\$ 176,720,896 \$ 146,887,680				\$	
	le Track Dilli & Biast le Track Mined (Soft Soil)	Mile	\$ 146,887,080			0.00		
	le Track Milled (30t 30t) le Track TBM (<6 Miles)	Mile	\$ 106,637,312			0.93		98,962,
	le Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 176,720,896			2.70	\$	
Seism	nic Chamber (Drill & Blast/Mined)	ea	\$ 126,205,952				\$	
Cross		ea	\$ 442,368				\$	
	Cover Double Track Tunnel	Mile	\$ 131,246,080			0.00	\$	
	th Long (2 tracks) (1000 ft+)	Mile	\$ 57,524,224	-		0.00	\$	
	th Long (4 tracks) (1000 ft+) th Short (2 tracks) (<1000 ft)	Mile Mile	\$ 86,286,336 \$ 78,843,904			0.00	\$	
	th Short (4 tracks) (<1000 ft)	Mile	\$ 118,265,856	1			Ψ	
	anical & Electrical for Tunnels	Mile	\$ 11,848,704			0.93	\$	10,995,
Retair	ning Walls	Mile	\$ 8,613,888			0.00	\$	
	ainment Walls	Mile	\$ 5,907,456				\$	
	e Track Cut and Cover Subway	Mile	\$ 131,246,080				\$	
	Track Drill & Blast Track Mined (Soft Soil)	Mile Mile	\$ 293,775,360				\$	
	Track Mined (Soft Soft) Track TBM (<6 Miles)	Mile	\$ 158,400,000 \$ 213,274,624				\$	
	Track TBM (<0 Miles) Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 353,441,792				\$	
	Track Cut & Cover Tunnel	Mile	\$ 262,492,160			0.00	+	
						2.30		
	e Separations							
	way Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$ 13,284,352				\$	
	way Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$ 19,926,528				\$	
	way Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$ 2,759,680				\$	
	way Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$ 2,029,568				\$	
	way Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban) way Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$ 3,563,520 \$ 3,593,216				\$	
	way Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban) way Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea ea	\$ 3,593,216				\$ \$	
	way Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$ 2,030,010				\$	
5 Roads				•	i I			

COST ELEMENTS	UNIT	UNIT PRICE		Tunnel (2 trad	cks) (HST only)	
Subsection 9(b)		Base: 2009			В	
		(3rd Quarter)	Start: 2760 + 00	End: 2809 + 00	0.93	Miles
Subsection Dedtails					Quant.	Cost
Double Track At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles	0031
Double Track Elevated (Mile)			Start: 0 + 00		0.00 Miles	
Double Track Tunnel (Mile)			Start: 2760 + 00	End: 2809 + 00	0.93 Miles	
Double Track Trench (Mile) Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	
Four Track Elevated (Mile)			Start: 0 + 00		0.00 Miles	
Four Track Tunnel (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Trench (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles	
8 Minor Crossing Closures	ea	\$ 87,040				\$ -
Dull-line Hanna						
Building Items 1 Intermediate Passenger Stations	Each	\$ -				\$ -
Intermediate Passenger Stations (Diridon)	Each	\$ 119,521,386			1	\$ 119,521,386
2 Terminal Passenger Stations	Each	\$ -				\$ -
Caltrain Passenger Station - At-Grade	Each	\$15,000,000				\$ -
Caltrain Passenger Station - On Structure	Each	\$15,000,000				\$ -
Caltrain Passenger Station - In Tunnel or Subway	Each	\$15,000,000				\$ -
Caltrain Passenger Station - In Trench 3 Maintenance Facility	Each Each	\$15,000,000 \$ 123,921,884			0	\$ - \$ -
4 Parking - Structures	space	\$ 123,721,004				\$ -
5 Parking - At Grade	space	\$ -				\$ -
	· ·					
Rail & Utility Relocation						
1 Single Track Relocation (Temporary)	Mile	\$ 2,000,896				\$ -
2 Single Track Relocation (Permanent) 3 Single Track Removal	Mile	\$ 2,000,896				\$ -
4 Major Utility Relocations - Dense Urban	Mile Mile	\$ 130,048 \$ 1,548,288				\$ - \$ -
5 Major Utility Relocations - Urban	Mile	\$ 1,084,416				\$ -
6 Major Utility Relocations - Dense Suburban	Mile	\$ 775,168				\$ -
7 Major Utility Relocations - Suburban	Mile	\$ 464,896				\$ -
8 Major Utility Relocations - Undeveloped	Mile	\$ 30,720				\$ -
DOWALL LAN						
ROW (Not Included) ROW required for each segment						
1 Dense Urban	Acre	\$ 2,786,321				\$ -
2 Urban	Acre	\$ 1,371,510				\$ -
3 Dense Suburban	Acre	\$ 908,134				\$ -
4 Suburban	Acre	\$ 208,418				\$ -
5 Undeveloped	Acre	\$ 3,642				-
ROW required for Temp. Construction Easement 1 Dense Urban	Aoro					¢
2 Urban	Acre Acre					\$ - \$ -
3 Dense Suburban	Acre					\$ -
4 Suburban	Acre					\$ -
5 Undeveloped	Acre					\$ -
Right-of-Way Required for Stations, Maintenance & Parking Facilities	١,					
6 Dense Urban	Acre	\$ 2,786,321				\$ -
7 Urban 8 Dense Suburban	Acre Acre	\$ 1,371,510 \$ 908,134				\$ - \$ -
9 Suburban	Acre	\$ 208,418				\$ -
10 Undeveloped	Acre	\$ 3,642				\$ -
Environmental Mitigation = 3% Line Costs						\$ 7,275,524
System Elements 1 Signaling (ATC)	Mile	\$ 2,070,000			0.93	\$ 1,921,023
2 Communications (w/ Fiber Optic Backbone)	Mile	\$ 2,070,000 \$ 540,000			0.93	
3 Wayside Protection System	Mile	\$ 108,000			0.93	
Electrification Items						
1 Traction Power supply	Mile	\$ 1,170,000			0.93	
2 Traction Power Distribution Subtotal	Mile	\$ 1,485,000	1		0.93	\$ 1,378,125 \$ 254,779,300
Program Implementation Costs (per screening)						\$ 254,779,300 \$ 64,968,722
Program Implementation Costs						. 51,700,722
Contingencies (per screening) (25%)						\$ 63,694,825
			<u> </u>			A 005 ::
Subtotal Subtotal Pounded)						\$ 383,442,847

Subtotal (Rounded) \$ 383,000,000

